Community Health Needs Assessment

Adventist HealthCare Washington Adventist Hospital 2017–2019

Approved by Adventist HealthCare Board of Trustees in November 2016

Adventist HealthCare
Washington Adventist Hospital

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Section I: Introduction

Adventist HealthCare Washington Adventist Hospital Overview

Washington Adventist Hospital

Adventist HealthCare Washington Adventist Hospital is a 231-bed acute-care facility located in Takoma Park, MD. The hospital opened in 1907 and was home to Montgomery County's first cardiac center. Today, hundreds of open-heart surgeries and thousands of heart catheterizations are performed at Washington Adventist Hospital each year. In addition, high-quality care is provided in such specialty areas as oncology, surgical services, mother & baby services and general and emergency medicine.

Heart and Vascular Care

Washington Adventist Hospital has provided the Washington, D.C. region with cutting-edge heart and vascular procedures with skill and compassion for more than 50 years. The first open-heart surgery in the region was performed at Washington Adventist Hospital. Since that time, Washington Adventist Hospital has continued to be recognized as a leader in heart surgery. The hospital celebrated the first of numerous cardiac procedures, including mitral valvuloplasty, a minimally invasive procedure that offers an alternative to traditional open-heart surgery.

Our experienced heart and vascular teams include board-certified cardiologists, electrophysiologists, heart and vascular surgeons, interventional cardiologists, echocardiographic sonographers, emergency physicians, and certified nurses with cardiac and critical care training. These medical professionals deliver innovative, individualized treatment in every aspect of heart and vascular care, including life-saving heart and vascular emergency procedures, including open-heart and minimally invasive surgery; valve surgery (minimally invasive and traditional approaches); minimally invasive catheterization procedures; state-of-the art diagnostics and treatment; electrophysiology (EP); and full cardiac rehabilitation services.

The hospital's Accredited Chest Pain Center was the first in the Washington, D.C. region to attain the highest level of accreditation, which recognizes high-quality care and rapid, life-saving treatment given to chest pain patients.

Our patients have access to cutting-edge treatments, including therapies researched and developed by our own physicians at the hospital's Center for Cardiac & Vascular Research (CCVR). CCVR is involved in world-class cardiology clinical research trials that range from arrhythmia treatments, to heart failure therapies, to therapies for the treatment of angina and heart attacks.

Cancer Care

The oncology program at Washington Adventist Hospital, accredited by the American College of Surgeons' Commission on Cancer (COC), covers every aspect of cancer treatment, from prevention and early detection to post-treatment monitoring. Both inpatient and outpatient services are available to accommodate a range of patient needs. Washington Adventist Hospital's radiation oncology program is the first hospital-based facility in Montgomery and Prince George's counties, and the first facility in the Washington metropolitan area to be accredited by the American College of Radiation Oncology (ACRO).

Washington Adventist Hospital's Cancer Program has received a three-year accreditation with commendation by the American College of Surgeons Commission on Cancer (COC). Only 30 percent of all hospitals in the U.S. are accredited, with only a minority receiving accreditation with commendation.

Orthopedic Care

The Joint Replacement Center at Washington Adventist Hospital provides a skilled surgical team experienced in the latest in joint replacement, state-of-the-art technology in the operating room, and compassionate nursing care. Our board-certified orthopedic surgeons have helped thousands of patients regain activity through joint replacement. Patients are supported by a care team made up of specially trained orthopedic nurses, patient care techs, physical therapists, occupational therapists and a patient educator. This team provides comprehensive, coordinated care, from pre- and postoperative education to rehabilitation and recovery.

Caring for Our Community into the Future

In March, Washington Adventist Hospital officially began its longstanding plan to expand access to healthcare in the region, breaking ground on a new hospital in White Oak along the border of Montgomery and Prince George's Counties. The hospital will move its acute-care operations to the new hospital and keep the current Takoma Park location for other healthcare services. The new hospital is projected to open in early 2019.

Section II: Our Community

The Community We Serve

Washington Adventist Hospital primarily serves residents of Montgomery and Prince George's Counties, Maryland. Below, Figure 1 shows the percentages of discharges by county for Washington Adventist Hospital:

County	Percentage
Prince George's	46.33%
Montgomery	40.80%
District of Columbia	5.23%

Figure 1. Washington Adventist Hospital discharges by county, 2015

Approximately 85.0 percent of discharges come from our Total Service Area, which is considered Washington Adventist Hospital's Community Benefit Service Area "CBSA" (see Figure 2). Within that area, 60.0 percent of discharges are from the Primary Service Area including the following zip codes/cities:

20737 – Riverdale, 20740 – College Park, 20782 – Hyattsville, 20783 – Hyattsville, 20901 – Silver Spring, 20902 – Silver Spring, 20903 – Silver Spring, 20904 – Siler Spring, 20906 – Silver Spring, and 20910 – Silver Spring, 20912 – Takoma Park, and 88888 – Homeless.

We draw 25.0 percent of discharges from our Secondary Service Area including the following zip codes/cities:

20002 – Washington, 20011 – Washington, 20012 – Washington, 20705 – Beltsville, 20706 – Lanham, 20707 – Laurel, 20708 – Laurel, 20710 – Bladensburg, 20712 – Mount Rainier, 20720 – Bowie, 20721 – Bowie, 20722 – Brentwood, 20743 – Capitol Heights, 20747 – District Heights, 20770 – Greenbelt, 20774 – Upper Marlboro, 20781 – Hyattsville, 20784 – Hyattsville, 20785 – Hyattsville, 20850 – Rockville, 20853 – Rockville, 20866 – Burtonsville, 20874 – Germantown, and 20905 – Silver Spring (see Figure 2).

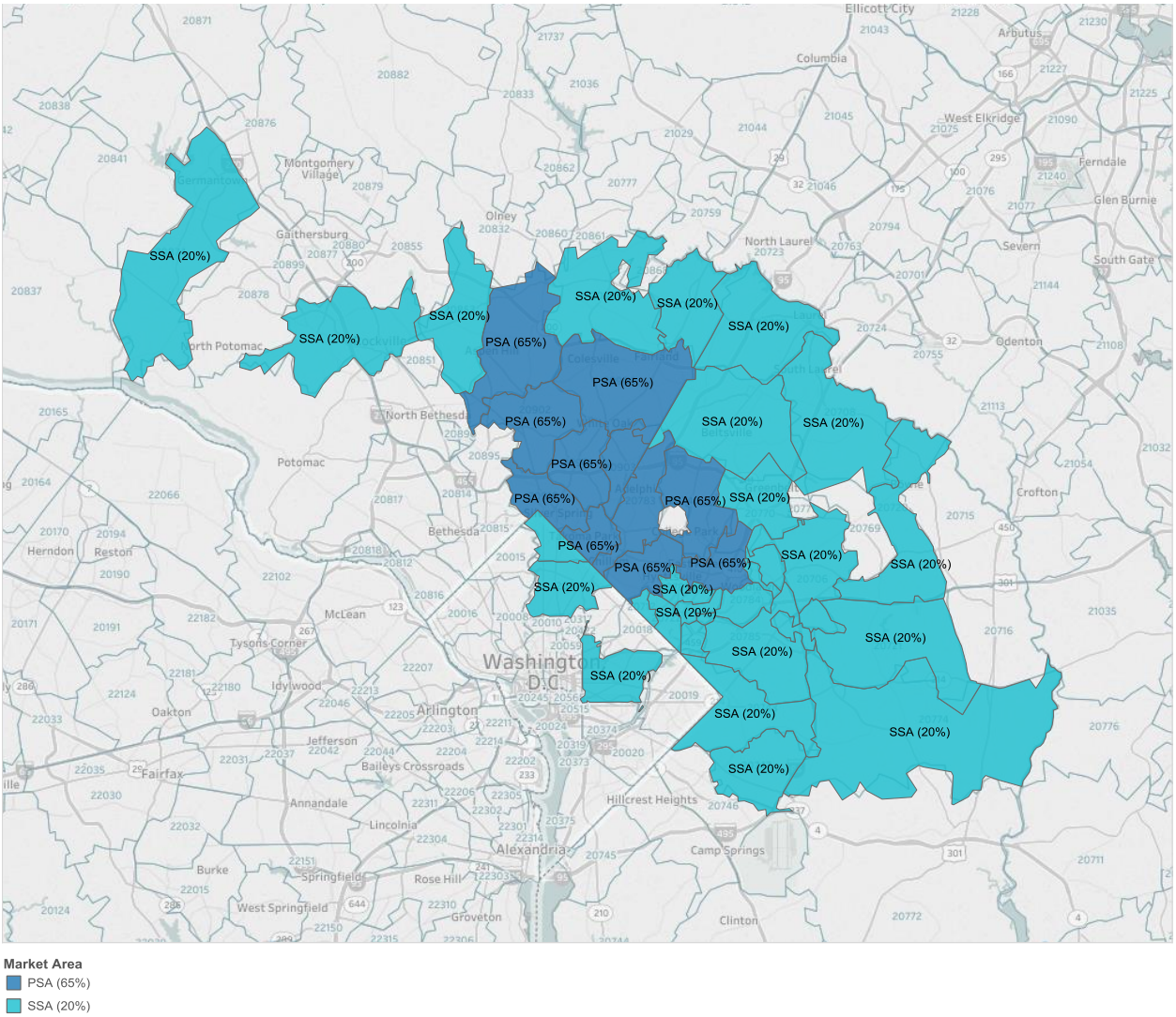


Figure 2. Map of Washington Adventist Hospital's Primary and Secondary Service Areas based on 2015 inpatient discharges

There are many different factors that can impact health which can include, but aren't limited to: education, the physical environment (e.g. availability of healthcare services and grocery stores), and income. Income can be considered a large barrier to health and wellness as income can affect a family's ability to pay for necessities such as healthcare services, healthy foods, and education. A wide body of research points to the fact that low-income individuals tend to experience worse health outcomes than wealthier individuals, clearly demonstrating that income disparities are tied to health disparities. Over 100,000 deaths in the U.S. can be prevented annually if individuals receive the recommended clinical preventative care[1]. A study by the CDC on the relationship between income and healthcare coverage found that a majority of adults are not receiving recommended clinical preventative care; however, those with insurance are more likely to receive care than the uninsured while individuals with higher income are most likely to receive recommended preventative care.[2] Therefore, the criteria used to identify vulnerable populations within Washington Adventist Hospital's CBSA are median household income and insurance status (see Figure 3).

[1] Fox, J. B., & Shaw, F. E. (2014). Relationship of Income and Health Care Coverage to Receipt of Recommended Clinical Preventive Services by Adults — United States, 2011–2012. *Morbidity and Mortality Weekly Report (MMWR),63*(61), 666-670. Retrieved December 16, 2016, from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6331a2.htm.

[2] Fox, J. B., & Shaw, F. E. (2014). Relationship of Income and Health Care Coverage to Receipt of Recommended Clinical Preventive Services by Adults — United States, 2011–2012. *Morbidity and Mortality Weekly Report (MMWR),63*(61), 666-670. Retrieved December 16, 2016, from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6331a2.htm.

Washington Adventist Hospital CBSA			
Location	**Zip Codes**	**Median Household Income (2015)**	**Percent Uninsured (2015)**
District of Columbia	20002	$74,303	6.60%
	20011	$62,281	10.70%
	20012	$80,991	6.30%
	Overall	$70,848	5.80%
Montgomery County	20850	$107,170	7.10%
	20853	$100,965	11.50%
	20866	$101,358	10.60%
	20874	$81,769	11.40%
	20901	$97,454	14.20%
	20902	$85,044	19.60%
	20903	$58,342	30.80%
	20904	$72,458	13.40%
	20905	$116,141	9.10%
	20906	$71,423	16.50%
	20910	$77,986	7.70%
	20912	$69,721	16.00%
	Overall	$99,435	10.30%
Prince George's County	20705	$74,022	14.20%
	20706	$70,754	15.40%
	20707	$75,742	11.70%
	20708	$64,134	13.50%
	20710	$42,226	19.60%
	20712	$47,048	25.80%
	20720	$133,641	5.30%
	20721	$120,994	5.80%
	20722	$60,900	21.90%
	20737	$56,672	27.80%
	20740	$59,633	10.90%
	20743	$57,671	12.60%
	20747	$60,421	9.70%
	20770	$62,909	16.00%
	20774	$93,216	7.60%
	20781	$67,000	24.20%
	20782	$64,562	21.70%
	20783	$60,958	38.70%
	20784	$58,564	19.00%
	20785	$60,883	13.70%
	Overall	$74,260	13.80%
Homeless*	88888	N/A	N/A
Maryland	*Overall*	$74,551	9.00%

*Note: Household income by zip code values are compared to the overall county median household income.
Income: Green indicates the location's income is equal to or above the county value. Red indicates the location's income is below the county value (i.e. a potentially vulnerable population.)
Insurance status: Green indicates the location's uninsurance percentage is below the county value. Red indicates the location's uninsurance percentage is above the county value (i.e. more uninsured without the zip code location than the county overall.)
*Homeless data unavailable; refer to Section: *Social Determinants of Health, Housing*

Figure 3. Median household income and percentage uninsured by zip code, 2015
(Source: Median Household Income in the Past 12 Months 15 ACS 5-Year Estimates; Selected Characteristics of Health Insurance Coverage 2015 ACS 5-Year Estimates)

Demographics

Our Community Benefit Service Area (CBSA), covering approximately 85.0 percent of discharges, includes 1,148,980 people, of which approximately 69.8 percent are minorities (see Figure 4).

	2015 Estimates				
	WHITE	BLACK/ AF AMER	ASIAN	NATIVE HI/PI	HISPANIC/ LATINO
Community Benefit Service Area (CBSA)	366,407	536,870	93,635	899	261,824
	30.82%	45.16%	7.88%	.08%	22.02%
Primary Service Area (PSA)	170,336	125,978	37,847	3,372	141,144
	39.20%	28.99%	8.71%	0.10%	32.49%
Secondary Service Area (SSA)	196,071	410,892	55,788	476	120,680
	25.99%	54.46%	7.39%	0.06%	16.00%

Figure 4. Population estimates (2015) by race/ethnicity for Washington Adventist Hospital's Total Service Area (85.0 percent of discharges), Primary Service Area (60.0 percent of discharges) and Secondary Service Area (25.0 percent of discharges)

Population demographics are rapidly changing in the state of Maryland, particularly among residents living in Montgomery and Prince George's Counties. We serve two of the most diverse communities in the United States, constantly undergoing the economic, social and demographic shifts that result from an ever-changing, ever-growing population. Over the past decade, Montgomery County has become not only the most populous jurisdiction in Maryland, but the second largest jurisdiction in the Washington, DC metropolitan area, and the 42nd most populous county in the nation, with the residents totaling almost one million.[3] Prince George's County has also become the second-largest jurisdiction in Maryland with almost one million residents.[4] Racial and ethnic diversity has concurrently increased with this drastic increase in population numbers. Every racial and ethnic group has increased in presence since 2010. Whites now comprise only 13.9 percent of the population of Prince George's County, a decrease of over 10.0 percent over the last decade.[5] Over 60.0 percent of Prince George's County is Black, making it a majority-Black population. The percentage of Hispanics or Latinos in Prince George's County (17.2 percent) is almost double the percentage of Hispanics or Latinos in the state of Maryland (9.5 percent), and within the county, it outnumbers all populations other than whites and Blacks.[6]

[3] U.S. Census Bureau. (2015). QuickFacts. Retrieved from https://www.census.gov/quickfacts/table/PST045215/24,24033,24031
[4] U.S. Census Bureau. (2015). Maryland at a glance: Population. Retrieved from: http://msa.maryland.gov/msa/mdmanual/01glance/html/pop.html#county
[5] U.S. Census Bureau. (2000). Race and Hispanic or Latino: 2000 - County – Census tract census summary 2000, summary file. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_GCTP6.CY07&prodType=table
[6] U.S. Census Bureau. (2015). QuickFacts. Retrieved from https://www.census.gov/quickfacts/table/PST045215/24,24033,2403124031

According to the U.S. Census Bureau, Maryland is one of the top ten destinations for foreign-born individuals, and 32.4 percent of the foreign-born in Maryland reside in Montgomery County.[7] Prince George's County's foreign-born population has gone from 6.0 percent in 1980 to currently 20.7 percent.[8] Immigrants contribute greatly to our community, and our hospital providers are committed to understanding their needs and working to treat them in a culturally competent manner.

As racial and ethnic minority populations become increasingly predominant, concerns regarding health disparities grow – persistent and well-documented data indicate that racial and ethnic minorities still lag behind nonminority populations in many health outcomes measures. These groups are less likely to receive preventive care to stay healthy and are more likely to suffer from serious illnesses, such as cancer and heart disease.

Further exacerbating the problem is the fact that racial and ethnic minorities often have challenges accessing quality healthcare, either because they lack health insurance or because the communities in which they live are underserved by health professionals. As the proportion of racial and ethnic minority residents continues to grow, it will become even more important for the healthcare system to understand the unique characteristics of these populations in order to meet the health needs of the community as a whole. As a result, this report examines health status and outcomes among different racial and ethnic populations in Montgomery and Prince George's Counties, with the goal of eliminating disparities, achieving health equity, and improving the health of all groups.

[3] U.S. Census Bureau. (2015). QuickFacts. Retrieved from https://www.census.gov/quickfacts/table/PST045215/24,24033,2403124031

[8] Maryland-National Capital Park and Planning Commission. (2000). Foreign-Born Population of Montgomery County Region, 1950-2000-Census Years. Retrieved from: http://www.montgomeryplanning.org/research/data_library/population/po34.shtm

Montgomery County Demographics:[9]

Demographics	Montgomery	Maryland
Total Population	1,040,116	6,006,401
Age, %		
Under 5 Years	6.50%	6.10%
Under 18 Years	23.40%	22.40%
65 Years and Older	14.10%	14.10%
Race/Ethnicity, %		
White	45.20%	52.00%
Black	19.10%	30.50%
Native American	0.70%	0.60%
Asian	15.40%	6.50%
Hispanic or Latino origin	19.00%	9.50%
Median Household Income	$98,704	$74,149
Households in Poverty, %	9.60%*	9.70%**
Pop. 25+ With H.S. Diploma, %	91.30%	89.0%
Pop. 25+ With Bachelor's Degree or Above, %	57.40%	37.30%
Notes: *2014 Small Area Income and Poverty Estimates (SAIPE) (2014) **American Community Survey (2015)		

Figure 5. Montgomery County Demographics

Prince George's County Demographics:[10]

Demographics	Prince George's	Maryland
Total Population	909,535	6,006,401
Age, %		
Under 5 Years	6.60%	6.1%
Under 18 Years	22.50%	22.4%
65 Years and Older	1.70%	14.1%
Race/Ethnicity, %		
White	13.90%	52.0%
Black	64.60%	30.5%
Native American	1.00%	0.6%
Asian	4.70%	6.5%
Hispanic or Latino origin	17.20%	9.5%
Median Household Income	$73,856	$74,149
Households in Poverty, %	10.30%*	9.70%**
Pop. 25+ With H.S. Diploma, %	85.60%	89.0%
Pop. 25+ With Bachelor's Degree or Above, %	30.40%	37.3%
Sources: *2014 Small Area Income and Poverty Estimates (SAIPE) (2014) **American Community Survey (2015)		

Figure 6. Prince George's County Demographics

[9] U.S. Census Bureau. (2015). QuickFacts. Retrieved from https://www.census.gov/quickfacts/table/PST045215/24,24033,24031

[10] U.S. Census Bureau. (2015). QuickFacts. Retrieved from https://www.census.gov/quickfacts/table/PST045215/24,24033,24031

Life Expectancy by County within the CBSA:

Life Expectancy	Montgomery County (in years)	Prince George's County (in years)
Overall[11] (2012-2014)	84.6	80.0
Sex[12] (2013)		
Male	79.5	74.8
Female	83.6	79.8
Race/Ethnicity[13] (2012-2014)		
Black	82.5	79.3
White	84.4	80.7

Figure 7. Life Expectancy by County within CBSA, Montgomery County

Mortality Rates by County within the CBSA (2008): [14]

Montgomery County: 555.5 per 100,000
Prince George's County: 808.2 per 100,000

Montgomery County performed better than the state value on the rate of deaths associated with falls (2012–2014):

SHIP Measure	County Value (2014)	Maryland State Value	National Value	County by Race/ Ethnicity	Maryland SHIP Target 2017
Rate of **deaths** associated with **falls** per 100,000 population	7.1	8.5	8.5	N/A	7.7

Figure 8. Age-Adjusted Death Rate due to Falls, Montgomery County
(Source: Healthy Montgomery, 2016)

[11] Maryland DHMH Vital Statistics Administration. (2014). Maryland state health improvement process results for Montgomery county. Retrieved from: http://dhmh.maryland.gov/ship/Pages/home.aspx
[12] Institute for Health Metrics and Evaluation (IHME). (2015). US county profile: Montgomery county, Maryland. Retrieved from: http://www.healthdata.org/us-county-profiles
[13] Maryland DHMH Vital Statistics Administration. (2014). Maryland state health improvement process results for Prince George's county. Retrieved from: http://dhmh.maryland.gov/ship/Pages/home.aspx
[14] Department of Health and Mental Hygiene. (2008). Environmental public health tracking county profiles. Retrieved from: http://phpa.dhmh.maryland.gov/OEHFP/EH/tracking/Pages/County-Profiles.aspx

Although Montgomery County performed better than the state value on the rate of infant mortality overall, there are disparities among racial and ethnic groups. For example, the infant mortality rate among blacks is approximately double the county baseline:

SHIP Measure	County Value (2014)	Maryland State Value	National Value (2013)	County by Race/ Ethnicity	Maryland SHIP Target 2017
Infant Mortality Rate per 1,000 births (2014)	4.8	6.5	6.0	Black 8.3 Hispanic 7.8 White 3.5	6.3

Figure 9. Infant Mortality Rate, Montgomery County
(Source: Healthy Montgomery. 2014)

Prince George's County performed better than the state value on the rate of deaths associated with falls (2012–2014):

SHIP Measure	County Value (2014)	Maryland State Value	National Value	County by Race/ Ethnicity	Maryland SHIP Target 2017
Rate of **deaths** associated with **falls** per 100,000 population (2014)	6.7	8.5	8.5	N/A	7.7

Figure 10. Age-Adjusted Death Rate due to Falls, Prince George's County
(Source: PGC Health Zone, 2014)

Prince George's County performed worse than the state baseline on infant mortality measures:

SHIP Measure	County Value (2014)	Maryland State Value	National Value (2013)	County by Race/ Ethnicity	Maryland SHIP Target 2017
Infant Mortality Rate per 1,000 births (2014)	6.9	6.5	6.0	Black 8 Hispanic 8.2	6.3

Figure 11. Infant Mortality Rate, Prince George's County
(Source: PGC Health Zone, 2014)

Income & Poverty

The median household incomes within Washington Adventist Hospital's main service areas of Montgomery and Prince George's Counties are $98,917 and $76,741, respectively.[15] Comparatively, the 2015 median household income in Maryland was $75,847, which was higher than the U.S. median of $55,775.[16] The median household incomes of the service areas of Washington Adventist Hospital may be higher than the state's median household income, but great income disparities exist when broken down by racial/ethnic groups. Throughout the areas served by Washington Adventist Hospital, across racial and ethnic groups, whites have the highest median household income; Blacks and Hispanics are more likely to live in poverty (see Figure 12).[17] However, when looking at the state of Maryland as a whole, Asians have the highest median income ($96,429). White households in Montgomery County had an even higher median household income of $116,925 while Hispanic and Black households had much lower median household incomes (see Figure 12). Household income has a direct influence on a family's ability to pay for necessities, including health insurance and healthcare services. A wide body of research points to the fact that low-income individuals tend to experience worse health outcomes than wealthier individuals, clearly demonstrating that income disparities are tied to health disparities.

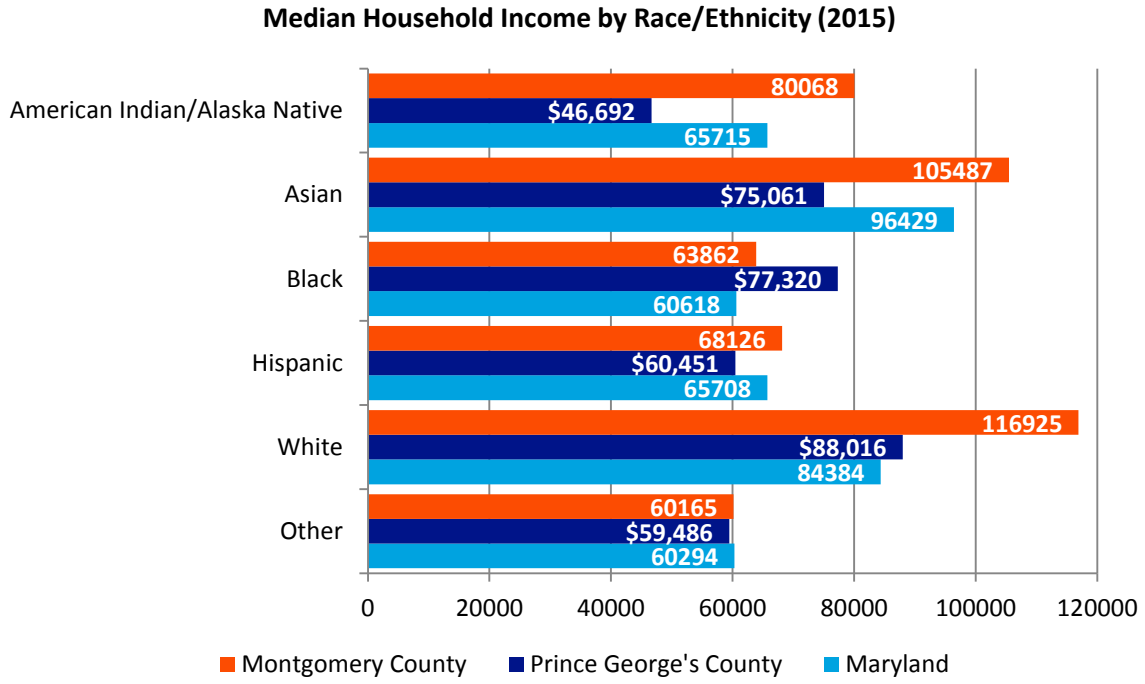


Figure 12. Median Household Income by Race/Ethnicity in Montgomery and Prince George's Counties and Maryland, 2015. (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

[5] U.S. Census Bureau. (2015). Median household income in the past 12 months: 2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_B19013&prodType=table

[16] U.S. Census Bureau. (2015). Median household income in the past 12 months: 2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_B19013&prodType=table

[17] U.S. Census Bureau. (2015). Median household income in the past 12 months: 2012-2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S1701&prodType=table

Montgomery County experienced an increase in residents living below the federal poverty level from 6.4 percent in 2012 to 7.5 percent in 2015.[18] The majority of that percentage is comprised of minorities.[19] In 2015, across all counties in Maryland, as well as within the Montgomery and Prince George's Counties service areas, more residents were living below the poverty level (10.3 percent) than in 2012 (9.7 percent), indicating a 6.2 percent increase in poverty.[20] The 2015 federal poverty level for a family of four is $24,250.[21] An overwhelming percentage of residents who identify as "Other," Hispanic, and Black are living below the poverty level in both counties and Maryland (see Figure 13). Over 8.0 percent of Black and Hispanic residents in Washington Adventist Hospital's service areas are below the poverty level opposed to approximately 5.0 percent of white residents (see Figure 13).

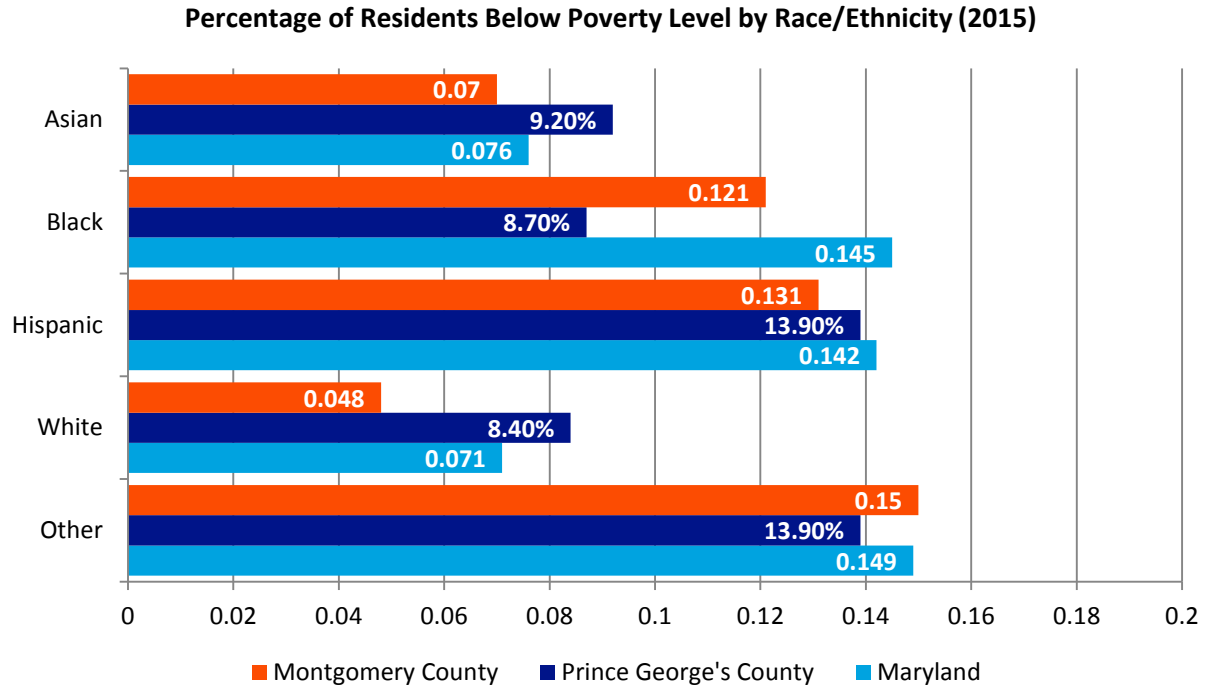


Figure 13. Percentage of Residents in Poverty by Race/Ethnicity in Montgomery and Prince George's Counties and Maryland, 2015 (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

[18] U.S. Census Bureau. (2015). Median household income in the past 12 months: 2012-2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S1701&prodType=table

[19] Healthy Communities Institute. (2011). Quantitative Needs Assessment: Social Determinants of Health Section. Retrieved from: http://www.healthymontgomery.org/javascript/htmleditor/uploads/SDOH.pdf

[20] U.S. Census Bureau. (2015). Poverty status in the past 12 months: 2012–2015 American community survey 1-year estimates. American Community Survey. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S1701&prodType=table

[21] Office of the Assistant Secretary for Planning and Evaluation. (2015). 2015 Poverty Guidelines. Retrieved from: https://aspe.hhs.gov/2015-poverty-guidelines#guidelines

Access to Care/Health Insurance Coverage

Within Washington Adventist Hospital's service areas, 8.0 percent of all Montgomery County residents and 11.0 percent of all Prince George's County residents were uninsured.[22] AHRQ's 2015 National Healthcare Disparities Report defines access to healthcare as the efficient and timely use of personal health services to obtain the best health outcomes. The report states that racial and ethnic minority groups—as well as people with low incomes—have disproportionately high rates of uninsurance or coverage through public programs. Overall, minorities tend to have more limited access to healthcare services—and the care they do receive is often of poor quality—which results in a multitude of healthcare complications.[23]

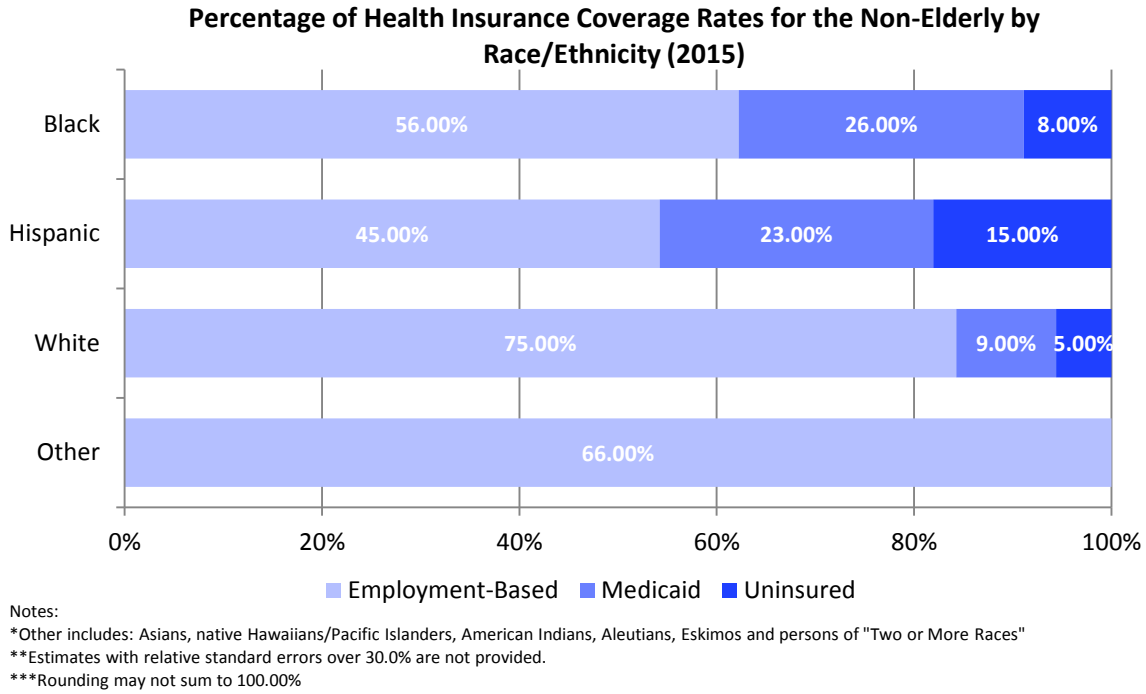


Figure 14. Health Insurance Coverage Rates of 0- to 64-Year Olds by Race/Ethnicity in Maryland, 2015. (Source: Kaiser Family Foundation, 2015 estimates based on U.S. Census Bureau 2016 Current Population Survey)

According to the Kaiser Family Foundation, approximately 7.0 percent of all Maryland residents under the age of 65 were uninsured. In 2015, Hispanics in Maryland were uninsured at almost twice the rate of Blacks and three times the rate of whites. Whites are most likely to have health insurance coverage through an employer-based plan than any other racial or ethnic group. Black individuals are more than twice as likely to be covered by Medicaid as whites across the state of Maryland (see Figure 14).

[22] U.S. Census Bureau. (2015). Selected characteristics of health insurance coverage in Montgomery County: 2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S2701&prodType=table

[23] Agency for Healthcare Research and Quality. (2016). 2015 National healthcare quality and disparities report and 5th anniversary update on the national quality strategy. *AHRQ Pub, 16-0015.* Retrieved from: http://www.ahrq.gov/research/findings/nhqrdr/nhqdr15/index.html

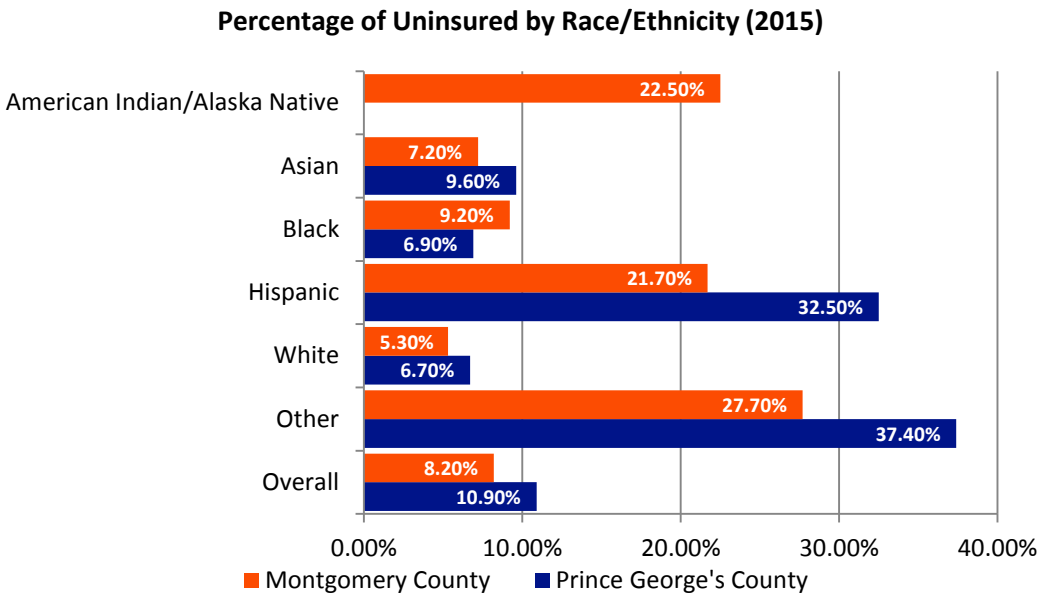


Figure 15: Percentage of Health Insurance Coverage by Race/Ethnicity in Montgomery and Prince George's Counties, 2015 (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

Across the state, Hispanics are more likely (15.0 percent) to not to have health insurance coverage than whites (5.0 percent) and Blacks (8.0 percent) (see Figure 15). This trend is similarly seen in Prince George's (32.5 percent) and Montgomery (21.7 percent) Counties as well (see Figure 15). Despite Montgomery County's relative wealth with regard to income, education and support for public services, between 80,000 and 100,000 residents lack health insurance.[24] Almost 90,000 residents in Prince George's County are lacking insurance as well.[25] They usually are not homeless or unemployed, but rather low income workers whose jobs no longer provide healthcare coverage, or self-employed individuals who cannot afford expensive premiums. Around 27.7 percent of the uninsured in Montgomery County and 37.7 percent in Prince George's County classify as "Other," while the rest are mostly Hispanic (21.7 percent and 32.5 percent), and American Indian and Alaska Native (22.5 percent in Montgomery County) (see Figure 15).

[24] U.S. Census Bureau. (2015). Selected characteristics of health insurance coverage in Montgomery County: 2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S2701&prodType=table

[25] U.S. Census Bureau. (2015). Selected characteristics of health insurance coverage in Prince George's county: 2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S2701&prodType=table

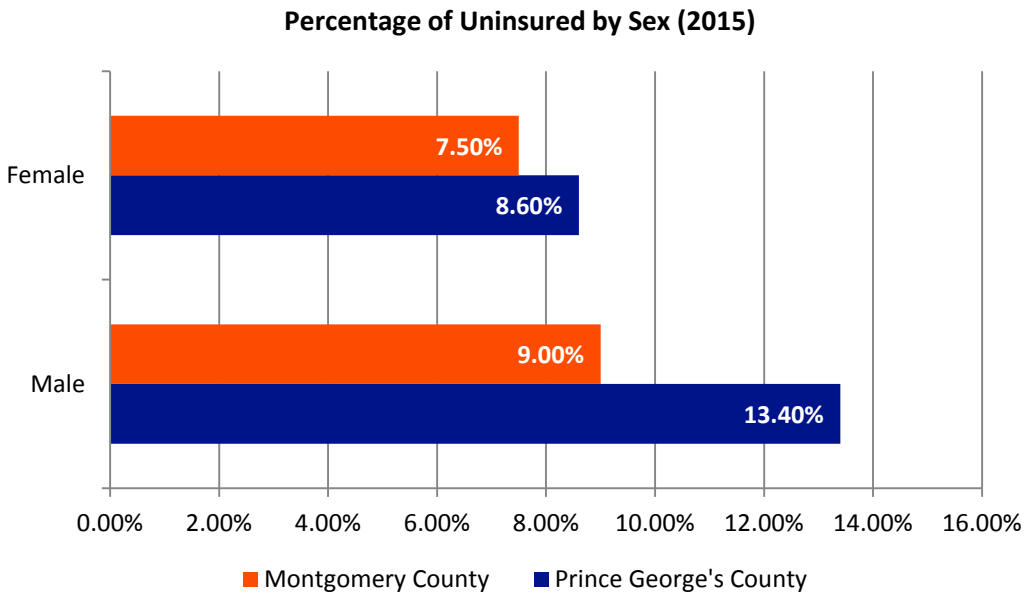


Figure 16: Percentage of Health Insurance Coverage by Sex in Montgomery and Prince George's Counties, and Maryland, 2015 (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

In Montgomery and Prince George's Counties, men are more likely to be uninsured than women, and rates of uninsurance among men (9.0 percent and 13.4 percent) while women stand at almost 7.5 percent and 9.0 percent, respectively (see Figure 16).

Within Washington Adventist Hospital's service areas, Montgomery and Prince George's Counties, the percentage of Medicaid recipients is 9.9 and 16.9 percent.[26]

[26] U.S. Census Bureau (2015). Public health insurance coverage by type: 2015 American community survey 1-year estimates. Retrieved from: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_1YR_S2704&prodType=table

Section III: Methodology

Data Collection & Analysis

Overview

In completing the Community Health Needs Assessment, Washington Adventist Hospital (WAH) strived to construct a complete picture of the needs and resources in the community. To do this, three strategies were utilized during the data collection and analysis process:

- **Collecting Input from the Community as well as from Reliable Secondary Sources**
  Secondary data sources are able to provide a big picture perspective of the needs in a community. They can provide information on the magnitude of a need, whether the need has increased or decreased over time, and how it compares to other population groups or geographic locations. Secondary data helps to answer the question of *what* the need is. This information can be made all the more rich with the addition of input directly from community members. From this input additional details, insights, and personal perspectives that may otherwise have been missed can be accounted for.

- **Focusing on Social Determinants of Health as well as Physical and Mental Health Needs**
  Social determinants of health can begin to answer the question of *why.* By considering social determinants such as income, insurance status, and transportation, among others, additional insight can be obtained regarding underlying causes of health problems as well as barriers to addressing them.

- **Utilizing a Health Equity Lens**
  Significant disparities continue to be prevalent across health needs, access to care, care received, and outcomes. As permitted by availability, data in this report is presented stratified by demographics such as race, ethnicity, sex, and age. By stratifying the data, disparities that may have otherwise been masked in aggregate are brought to the forefront. By stratifying, the question of *who* is most in need can be better answered.

Through a clearer understanding of what the needs are, who is most affected, and what barriers they may face, a more strategic and targeted plan of action can be developed to address the needs in the community.

Primary Data

The Adventist HealthCare (AHC) Community Health Needs Assessment survey was developed by the Center for Health Equity and Wellness. Prior to distribution, it went through two rounds of review, first by the AHC Community Benefit Council and then by the Center for Health Equity and Wellness Advisory Board. The survey was originally created in English and translated into Spanish through Uno Translations and Communications, LLC in order to reach Spanish-speaking communities in AHC's service area. The survey consisted of three sections focusing on health status and access to care, community health needs and strengths, and demographics.

Primary data collection began in June 2015 and lasted through November 30, 2015. Adventist HealthCare used two approaches in distributing the surveys: in-person and online via SurveyMonkey. In person surveys were offered in both paper format and on tablets at various community locations and events in the AHC service area. Electronically the survey was distributed by the marketing department via email as well as through social media outlets including Facebook and Twitter. Additionally the survey was shared with community organizations and partners for distribution.

In order to bolster responses, three prizes were offered as incentive for survey participants. When completing the survey, participants were provided with the option to enter the prize raffle. All identifying information was stored separately from, and not associated with survey responses. A grand prize of an IPad Mini as well as two $50.00 Target gift cards were awarded to three randomly selected survey participants.

There were a total of 1,349 survey responses. The responses were filtered by ZIP code to determine whether they were within AHC's community benefit service area. This resulted with 1,185 responses from the system's general community benefit service area and 449 from Washington Adventist Hospital's community benefit service area in particular.

Both qualitative and quantitative analyses were conducted. A thematic analysis based on Healthy People 2020's five areas of social determinants of health[1] was carried out on the qualitative portion of the survey. Social determinants of health, as described by the Office of Disease Prevention and Health Promotion, are conditions in which people are born, live, work, and age that affect a wide range of health and quality of life outcomes. Healthy People 2020's five areas of social determinants of health are Economic Stability (i.e. poverty, food security), Education (i.e. high school graduation, language and literacy), Social and Community Context (i.e. civic participation, incarceration), Health and Health Care (i.e. access to health care, health literacy), as well as Neighborhood and Built Environment (i.e. quality of housing, environmental conditions).

To supplement AHC's qualitative findings, Healthy Montgomery's Community Conversations were incorporated into this report. Healthy Montgomery conducted 15 focus groups with a diverse group of people, including individuals experiencing homelessness, people with disabilities, seniors, and various racial/ethnic groups. They also conducted specific focus groups in different languages such as Spanish, Korean, and Chinese, among others.

The quantitative analysis was conducted using Tableau software. Data from the surveys was stratified by age, gender, race, ethnicity, income, educational level, language, and hospital service area to investigate the results thoroughly.

Some challenges encountered throughout the data collection process were a lack of a standard definition of "community", disinterest from the public, and obtaining a sample inclusive of hard to reach populations. In terms of a standard definition of "community", many respondents were asking for a more specific definition and scope of what "community" encompassed. In attempting to collect survey responses, in particular in person, it was difficult to garner interest in completing the survey. In order to address this, the survey was cut down to 10 questions followed by demographics. Prize incentives were

[1] Office of Disease Prevention and Health Promotion (2016). *Social Determinants of Health.* Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

also adopted in order to address this. Finally, a limitation encountered was reaching a representative sample of the community. The perspective and voice of many difficult to reach populations such as homeless individuals was in part able to be accounted for by incorporating findings from the Healthy Montgomery Community Conversations. These challenges and limitations will serve as continued areas for improvement in future efforts to gather input from the community.

Secondary Data

Several sources of secondary data were utilized in completing this needs assessment. Sources included but are not limited to Healthy Montgomery, PGC Health Zone, the Maryland State Health Improvement Process, U.S. Census Bureau's American Community Survey, Maryland Behavioral Risk Factor Surveillance System, National Cancer Institute, Centers for Disease Control and Prevention, and Community Commons. These and numerous other sources are cited throughout the findings section of this report.

Much of the data presented is at the county level as that was often the most granular level of data available. A standard format was used for the graphs and charts presented in the findings. As was available and applicable:

- Data is stratified by race, ethnicity, sex, and age in order to highlight any disparities that may be present
- A time series is provided in order to better understand how each indicator has changed over time, whether it is improving, worsening, or has plateaued
- Relevant targets and benchmarks are included in order to provide perspective on how each indicator on the local level compares to other counties, the state, country and/or established targets (e.g. the MD State Health Improvement Process 2017 targets and Healthy People 2020 goals)

Data Gaps Identified

Despite extensive efforts to prepare comprehensive sets of stratified health access and health status indicators at the local level, the following limitations persist:

- Data was often unavailable at the ZIP code level
- The majority of databases do not differentiate races in persons of Hispanic origin
- Much of the data were obtained from different sources with various data collection and publication protocols
- Some indicators available, such as from the Maryland Behavioral Risk Factor Surveillance System, are self-report and as such may provide unreliable estimates due to under- or over-reporting
- While trend data was more readily available, it was often unavailable or difficult to access historical data points stratified by race and ethnicity
- Due to the three year time-frame of the community health needs assessment, some of the indicators included could not be updated because new data was not yet available
- The same indicators were not always available for both Montgomery and Prince George's Counties, or were not available for the same time period

Community Input

Sources of Input & Timeline

Throughout the completion of the 2017-2019 Community Health Needs Assessment, input from the community was solicited from multiple sources.

Healthy Montgomery

Washington Adventist Hospital, in addition to the other Montgomery County hospitals, collaborates with Healthy Montgomery, which serves as the Local health Improvement Coalition in Montgomery County. Healthy Montgomery works to bring together the county government, hospital systems, minority health programs, advocacy groups, academic institutions, and other community based stakeholders to achieve optimal health and well-being for all county residents. The group works to set a health priority agenda as well as an action plan to address the prioritized needs. In doing so, the group has established a core measure set for the top priority areas as well as a community health dashboard for the county. The dashboard encompasses indicators that span physical and mental health, health behaviors, and social determinants.

WAH contributes $25,000 annually to support the infrastructure of Healthy Montgomery. In addition to providing financial support, representatives from Adventist HealthCare play an active role through representation on multiple committees and planning groups including the Healthy Montgomery Steering Committee which sets the direction for the group. Representatives from AHC have also played roles in the Data Project Subcommittee, Behavioral Health Work Group, and Community Health Needs Assessment Committee.

In completing this Community Health Needs Assessment, WAH utilized the Healthy Montgomery priority areas not only as a starting point for identifying the needs in the community but also as a factor for consideration when completing the prioritization process. The Healthy Montgomery Community Conversations, which provided input from minority, underserved and hard to reach populations, were also utilized as a supplement to the primary survey data that was collected by WAH, as described in the previous section.

Direct Input from the Community

From June-November of 2015, a 19 item survey was administered in the community to garner input on the needs, strengths, and resources in the community. The survey consisted of three parts including health status and access to care, community health needs and strengths, and demographics. A total of 1,185 responses were received and analyzed. The Healthy Montgomery Community Conversations, which provided input from minority, underserved and hard to reach populations, were also utilized as a supplement to the primary survey data that was collected by WAH. The community conversations consisted of 15 focus groups:

- Youth
- Seniors
- People with Disabilities
- Homeless Men
- Homeless Women
- Latino Community (took place in Spanish)
- Korean Community (took place in Korean)
- Chinese Community (took place in Mandarin)
- Vietnamese Community (took place in Vietnamese)
- Asian American Health Initiative
- African American Health Program, African Advisory Group, and Caribbean Advisory
- Faith Community
- General Public: East County
- General Public: South County
- General Public: Up County

A detailed overview of the methods used to conduct the survey and complete the primary data analysis is described above and the results of the analysis can be found in Section IV.A Primary Data findings.

Center for Health Equity and Wellness Advisory Board

The Center for Health Equity and Wellness Advisory Board is comprised of stakeholders who represent and are able to speak to the needs of the community including minority and underserved populations. The Board was convened to help guide efforts to reduce and eliminate health disparities, identify community needs, and to help asses and direct our response to those needs.

The Board was consulted at multiple points throughout the completion of the community health needs assessment:

- April 2015: A draft of the community survey was sent to the Board for input.
- May 2015: A progress update on the 2014-2016 implementation strategy was provided to the Board at which time they were able to provide input on the strategies implemented and recommendations for future directions.
- October 2015: A timeline and framework for the 2017-2019 community health needs assessment was presented for input.
- May 2016: A detailed presentation was delivered outlining the initial findings from the primary data analysis as well as the methodology for the overall community health needs assessment report. The Board provided input on the health needs and barriers they viewed as most significant for the minority and underserved populations in the community.

The members of the 2015-2017 Center for Health Equity and Wellness Advisory Board represent a diverse group of stakeholders and populations in the community and provide a wealth of expertise in the health and wellness field. Advisory board members include:

Carol Garvey, MD
Principal, Garvey and Associates

Carole Working
Principal, Quince Orchard High School

Christopher King, PhD
Director, Experiential Learning, Georgetown University

Daniel Cochran
CFO, Shady Grove Medical Center

Hannah Mack
Learning and Innovation Manager, Cook Ross

Jo Cimino
Director, Case Management, Adventist HealthCare

Joan Vincent
Chief Nursing Officer, Shady Grove Medical Center

Katherine Barmer
Director, Population Health Management, Adventist HealthCare

Kevin Smothers, MD
Chief Medical Officer, Shady Grove Medical Center

Leslie Graham
President and CEO, Primary Care Coalition

Lois Wessel, CFNP
Association of Clinicians for the Underserved

Mark Rulle, EdD
President, Maryland Healthcare Education Institute, Maryland Hospital Association

Olivia Carter-Pokras, PhD
Professor, University of Maryland School of Public Health

Perry Chan, MS
Program Manager, Asian American Health Initiative

Sonia Mora, MPH
Program Manager, Latino Health Initiative

Stephen B. Thomas, PhD
Director, Maryland Center for Health Equity

Susan Glover
Sr. VP Quality, Adventist HealthCare

Uma Ahluwalia
Director, Montgomery County Department of Health and Human Services

Heather Ross, MHS
Program Manager, African American Health Program

Comments on Previous Community Health Needs Assessment and Implementation Strategy

In addition to the feedback solicited from the Center for Health Equity and Wellness Advisory Board, Washington Adventist Hospital welcomed comments from the general public on the needs assessment and implementation strategy. On the Adventist HealthCare website where both reports were posted, a dedicated email address (ourcommunity@adventisthealthcare.com) was listed for the public to submit feedback.

Prioritization Process

Process and Criteria Used

The prioritization process was completed in two phases. In the first phase, taking into account best practices, the Center for Health Equity and Wellness selected the factors that would be considered when completing the prioritization process. The following list of factors was developed:

- **Incidence and Prevalence**: How big of a problem is the need in the community?
- **Presence and Magnitude of Disparities**: Are some populations disproportionately burdened?
- **Change over Time**: Has the need improved, worsened, or seen no change in recent years?
- **Alignment with County Priority Areas**: Is the health area aligned with Montgomery County's priority areas?
- **Community Input**: Based on the primary survey data, Healthy Montgomery Community Conversations, and input from the Center for Health Equity and Wellness Advisory Board, what are the most significant areas of need as identified by the community?
- **Existing Resources, Expertise, and Partnerships**: Does the hospital have resources, existing programing, expertise, or existing/potential partnerships that can be leveraged to effectively address the need?
- **Gaps and Resources in the Community**: Are there existing resources sufficiently addressing the need or are additional resources needed? Where specifically do the gaps lie?
- **Potential for Measurable and Achievable Outcomes**: Are there relevant outcome measures? Will it be possible to make an impact?

Utilizing this list, each identified need was scored on a scale of 1 to 5 indicating the urgency for addressing the need. The scores for each need were totaled and ranked in order to create a preliminary prioritization.

In the second phase, the preliminary prioritization, as well as a synthesized version of the primary and secondary data findings was presented to Washington Adventist Hospital's President's Council. The Council, which is composed of hospital leadership as well as system-wide executive leadership, reviewed the findings and based on the data selected a committee to complete the final prioritization of the needs identified. The committee reviewed the data in more depth, utilizing the preliminary prioritization as well as the prioritization factors, to construct the final prioritized list of needs.

Final Prioritized List of Needs

The final prioritized list of needs for the Washington Adventist Hospital 2017-2019 Community Health Needs Assessment is as follows:

1. Obesity
2. Cardiovascular Health
3. Diabetes
4. Maternal and Child Health
5. Housing
6. Food Access
7. Behavioral Health
8. Breast Cancer
9. Prostate Cancer
10. Lung Cancer
11. Colorectal Cancer
12. Cervical Cancer
13. Thyroid Cancer
14. Flu
15. Asthma
16. Education
17. HIV

Section IV: Findings

Part A:
Primary Data Findings

Primary Data Findings

KEY FINDINGS

- The majority of the participants was female, white, non-Hispanic, and highly educated.
- Disparities were observed in the participants' self-reported health status: Blacks reported higher rates of high blood pressure; those who identify as two or more races reported higher rates of obesity; and those who identified as other race reported higher rates of diabetes and high cholesterol.
- Heavy traffic/long commutes, obesity, stress/living in a high-pressure area, diabetes, high blood pressure and heart disease were rated as the top six community health needs
- Some of the health needs ranked lower, such as asthma, STDs, HIV/AIDS, lack of safe green space, etc., are more typically known to affect the populations not reached by this survey.
- The lack of access to quality, nutritious food items; lack of affordable, quality education; proliferation of mental health issues in the community; lack of mental health care; and pollution/quality of air were indicated as additional problems in the community.
- The many urgent care centers, community centers, religious organizations, recreation parks, walking and biking trails in the area were perceived as resources available in the community.
- The survey results from Adventist HealthCare's primary data parallel that of Healthy Montgomery's findings.

Primary Data Findings

Primary Community Health Needs Survey

Adventist HealthCare Center for Health Equity and Wellness conducted the community health needs assessment primary survey between June and November of 2015. Detailed methodology for the survey data collection can be found in Section III of this report. A total of 1,185 community residents completed the survey. Although this is a sizable participant pool, the demographics of the participants were skewed. Most of the participants were white, insured, highly educated, had high income, and were mostly female. Minorities, males, uninsured, underinsured, low education, underserved populations and more were underrepresented in the participant pool. This underrepresentation is noteworthy as it directly affects the results of the survey because the unreached populations may have differing health needs from these survey respondents.

The following section describes the demographics of the survey participants in detail and outlines the quantitative and qualitative results of the data. The findings from Healthy Montgomery's primary data collection and analysis are also highlighted at the end of this section for comparison purposes.

Demographics of Respondents

Of the 1,185 respondents, 449 (37.89 percent) live in the Adventist HealthCare Washington Adventist Hospital service area. Around 48 percent of these survey respondents self-identified as white, followed by Blacks (22.05 percent), Asians (13.36 percent), and Hispanics (11.58 percent) (Figure 1 and Figure 2). The majority of the respondents was female (Figure 3). Approximately 53 percent of the respondents fell into the 26- to 45- year old category (Figure 4).

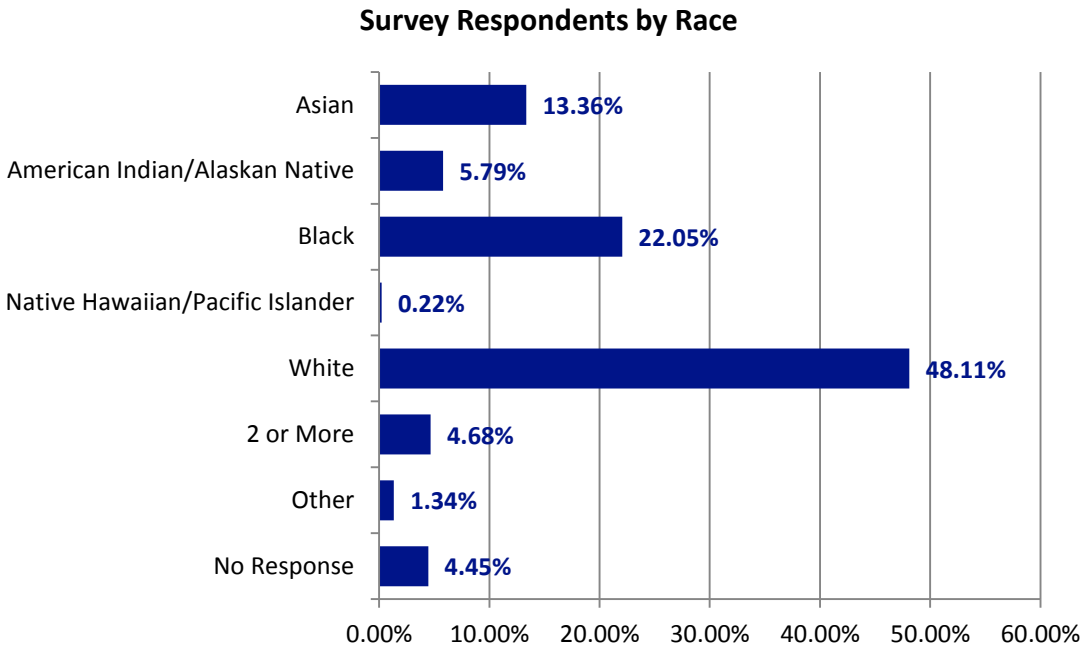


Figure 1. Survey Respondents by Race, 2015

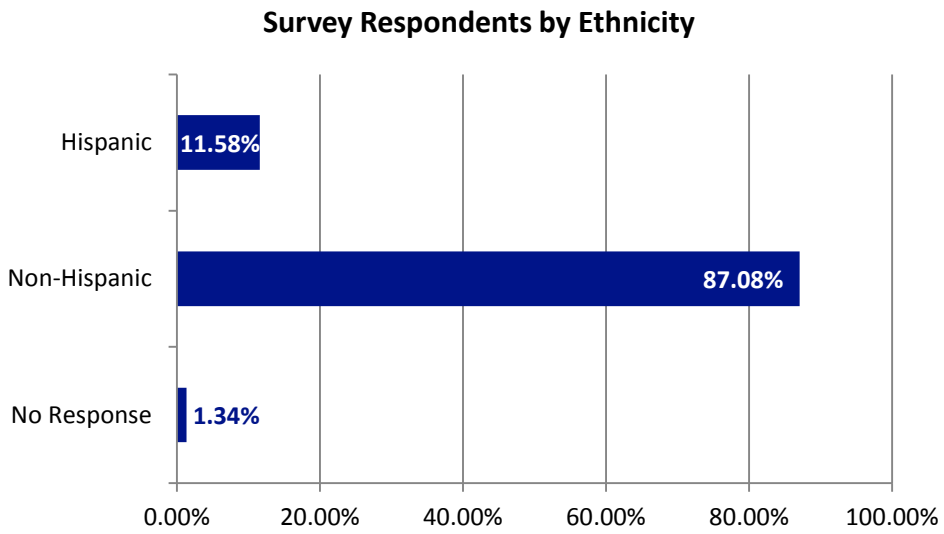


Figure 2. Survey Respondents by Ethnicity, 2015

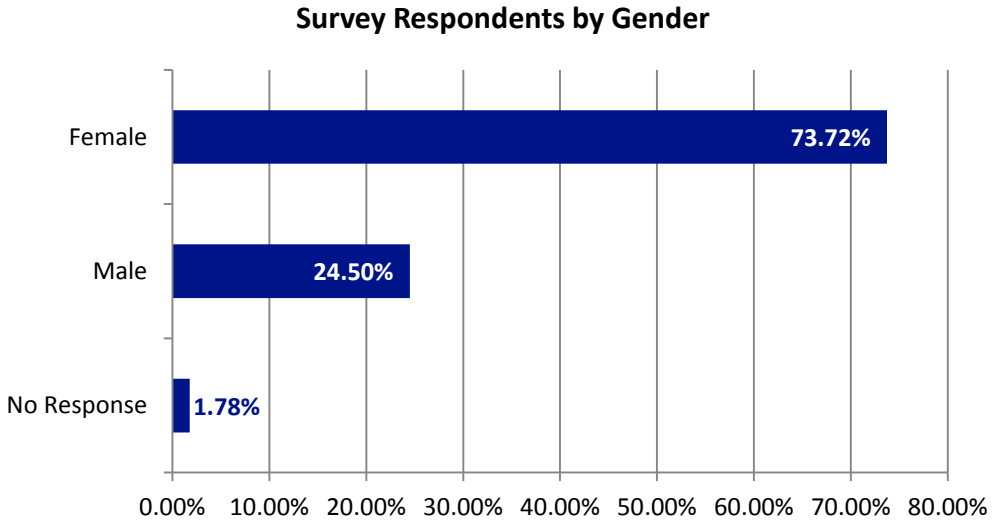


Figure 3. Survey Respondents by Gender, 2015

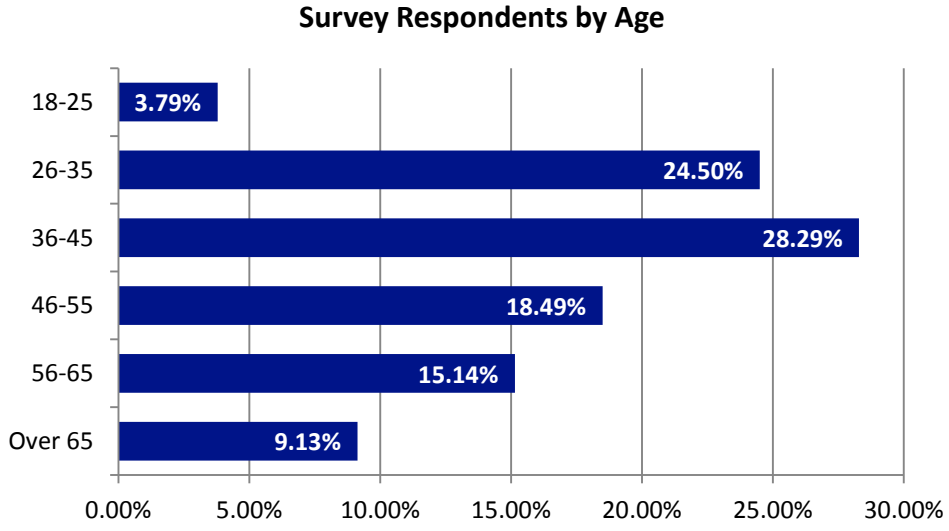


Figure 4. Survey Respondents by Age, 2015

In terms of socioeconomic status, as measured by annual income and highest level of education, the participant pool was skewed towards the upper range. More than half of the participants had an annual income exceeding $75,000 (Figure 5). The respondents' education levels also reflect this. Figure 6 shows approximately 65 percent of the participants had at least a bachelor's degree or a post graduate degree.

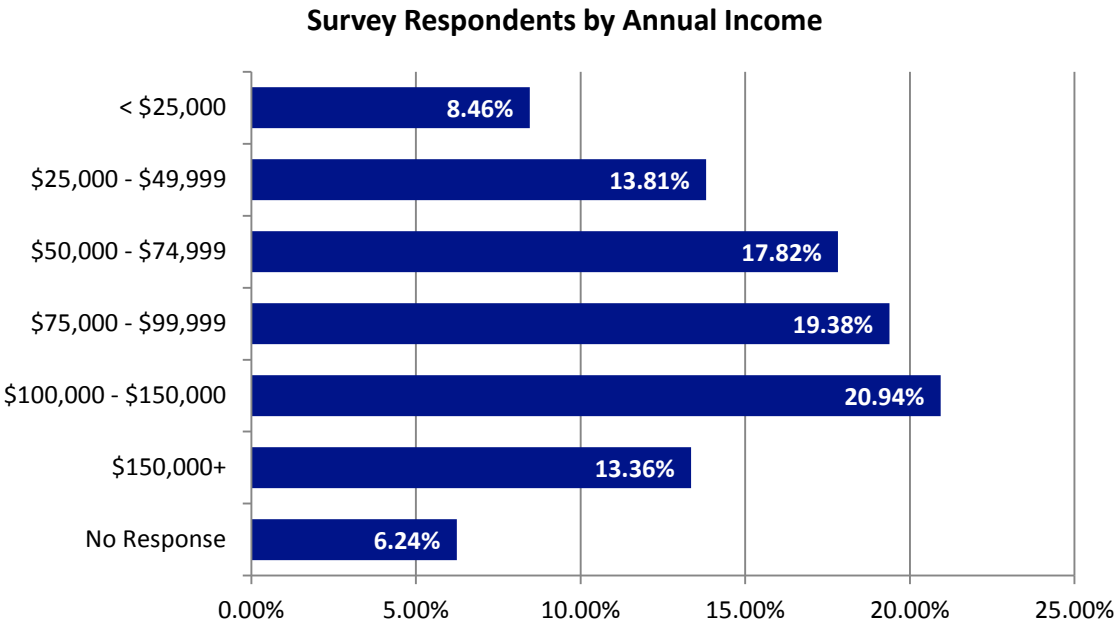


Figure 5. Survey Respondents by Annual Income, 2015

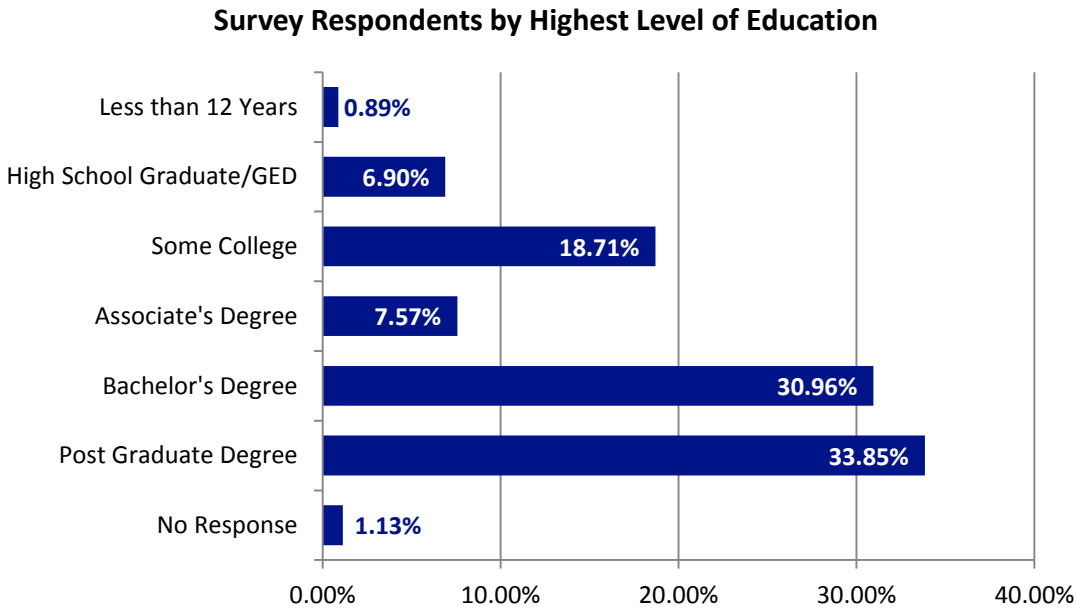


Figure 6. Survey Respondents by Highest Level of Education, 2015

Quantitative Analysis Results

Health Status & Access to Care

Participants were asked to rate their overall mental and physical health on a scale of poor to excellent. A majority of the participants rated their mental health as very good or excellent (Figure 7). In terms of physical health, most participants rated themselves to be in good or very good physical health (Figure 8).

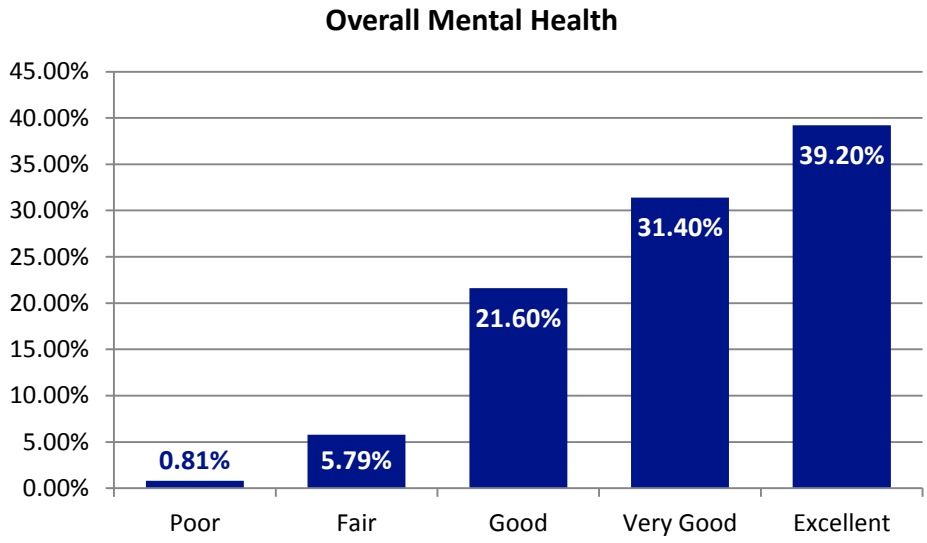


Figure 7. Survey Respondents' Self-Reported Overall Mental Health, 2015

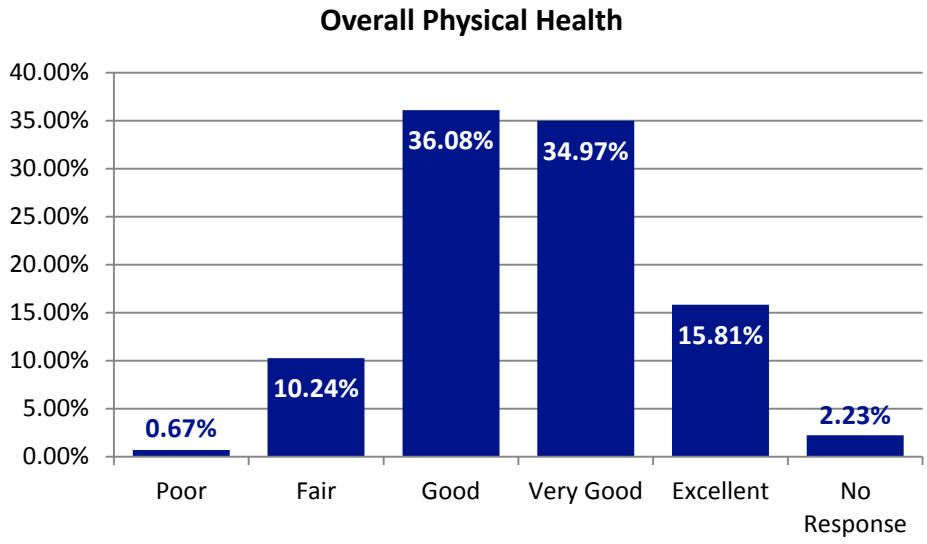


Figure 8. Survey Respondents' Self-Reported Overall Physical Health, 2015

Participants were asked if they are able to visit a doctor when needed. About 62 percent reported that they are always able to see their doctor when they need (Figure 9). Those who could not always do so reported various reasons as to why not. Table 1 lists the reasons participants reported. Their inabilities to get a doctor's appointment quickly or take time off to go to the doctors were the reasons reported most.

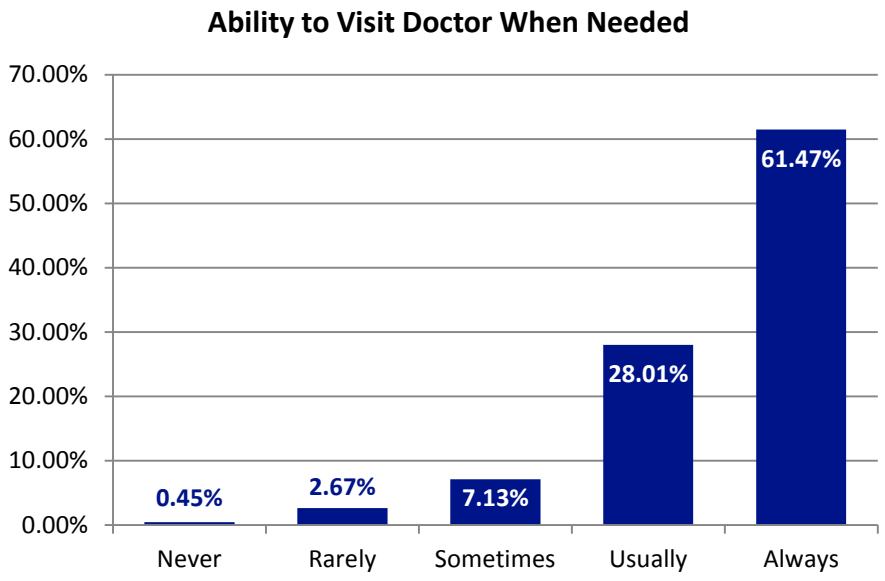


Figure 9. Survey Respondents' Self-Reported Ability to Visit Doctor When Needed, 2015

Reasons for Not Being Able to Visit Doctor	Number of Respondents
Busy work schedule/unable to take time off	78
I can't get an appointment quickly	72
It's too expensive and I can't afford it	20
I don't have a regular doctor	15
I don't have transportation	9
I can't find a doctor who accepts my insurance	8
Unable to get childcare	8
Doctor is not accepting new patients	8
I don't have health insurance	7
The doctor is too far away	7

Table 1. Survey Respondents' Reasons for Not Being Able to Visit Doctor When Needed, 2015

To assess health status, the survey asked if the participants were ever told of having or being at risk for health conditions such as high blood pressure, obesity, diabetes and high cholesterol. Hundreds of the participants indicated having or being at risk of developing the conditions (Table 2).

Health Risk	Number of Respondents
High Blood Pressure	125
High Cholesterol	128
Obesity	94
Diabetes/High Blood Sugar	97

Table 2. Number of Survey Respondents at Risk for Various Health Conditions, 2015

When stratified by race, some disparities were evident among the participants' health status (Table 3). About 65 percent of the 99 Black participants reported having high blood pressure compared to 57.87 percent of the white participants. Approximately 29 percent of those who identified as two or more races reported being obese or overweight compared to around 25 percent of the white participants. Higher rates of diabetes and high cholesterol were reported by participants who identified as "other" compared to their racial counterparts.

Health Risk	White (n=216)	Black (n=99)	Asian (n=60)	Hispanic (n=52)	American Indian (n=26)	Native Hawaiian (n=1)	2 or More (n=21)	Other (n=6)
High Blood Pressure	57.87%	65.65%	46.67%	25%	65.38%	0%	47.62%	--
Obesity	25%	21.21%	11.67%	17.31%	11.54%	0%	28.57%	0%
Diabetes	21.3%	21.21%	25%	23.08%	19.23%	0%	23.81%	33.33%
High Cholesterol	32.87%	25.25%	20%	28.85%	19.23%	0%	38.1%	50%

Table 3. Survey Respondents' Health Risks, 2015

Participants were also surveyed about their health maintenance and prevention practices. Participants indicated when they last had their physical checkup, dental exam, mammogram, Pap smear, colonoscopy, and flu shot. The results show that most of the survey respondents took good care of their health and had their prevention checkups within the recommended time periods (Table 4). For example, 74.11 percent of the respondents had their last physical within the year prior to the survey, and almost 43 percent of the women had their last mammogram within the two years prior to the survey.

Check-Up	Less than 6 Months	6 Months	1-2 Years	3-5 Years	More than 5 Years	Never	N/A
Last Physical	44.77%	29.34%	15.37%	5.57%	2.45%	0.89%	1.11%
Last Dental	54.57%	20.49%	14.03%	3.79%	4.90%	0.89%	0.45%
Last Mammogram	15.37%	15.14%	12.03%	5.57%	2.45%	17.82%	14.70%
Last Pap Smear	17.15%	26.95%	19.15%	4.68%	4.23%	1.11%	12.47%
Last Colon Screening	2.90%	4.23%	9.58%	11.58%	10.69%	42.54%	12.25%
Last Flu Shot	18.93%	55.68%	7.13%	4.45%	2.9%	8.2%	1.11%

Table 4. Survey Respondents' Health Maintenance History, 2015

Community Health Concerns

In order to assess the health needs of the community, the survey had participants rate how problematic certain health issues and social determinants of health were on a scale of 1 (not a problem) to 5 (serious problem). In case they did not know enough about an issue, participants also had the option of indicating "unsure/don't know". The health needs were then ranked according to their average scores.

Table 5 below displays the participants' rating of all issues in order of most problematic to least problematic. Overall, the number one concern for all participants was the heavy traffic and long commutes in the community. This issue was closely followed by obesity/overweight and the stress that comes with living in a high-pressure area. Other health concerns rated high were diabetes, high blood pressure, and heart disease. Social determinants of health such as housing and affordable health care were also rated among the top ten health concerns in the community.

Overall Participants' Rating of Community Health Needs			
Rank	**Health Need**	**Average Score**	**Respondents (n)**
1	Heavy Traffic/Long Commutes	3.772	1019
2	Obesity/Overweight	3.654	1030
3	Stress/Living in a High-Pressure Area	3.628	1010
4	Diabetes/Sugar	3.458	980
5	High Blood Pressure/Stroke	3.445	986
6	Heart Disease	3.353	946
7	Affordable Health Care	3.331	979
8	Affordable and Adequate Housing	3.284	969
9	Cancer	3.254	944
10	Mental Health	3.049	936
11	Asthma/Lung Disease	2.862	920
12	Substance Abuse/Addiction	2.856	944
13	Smoking/Tobacco use	2.826	981
14	Availability of Health Care	2.802	992
15	Violence/Crime	2.777	984
16	Service for the Disabled	2.728	898
17	Domestic Violence	2.684	908
18	Dental Health	2.663	924
19	Infectious Disease (Flu, Hepatitis)	2.608	934
20	Child Abuse/Neglect	2.593	911
21	Availability of Safe Green Space/Recreation Areas	2.543	1014
22	Prenatal/Infant Health	2.487	892
23	Other STDs	2.455	851
24	Suicide	2.404	882
25	Teen Pregnancy	2.370	879
26	HIV/AIDS	2.295	857

Table 5. Participants' Rating of Community Health Needs, 2015

The underrepresentation of minorities, uninsured/underinsured, underserved, lower education populations in the participant pool affects the ratings of community health needs in Table 5 above. Some of the health needs ranked lower, such as asthma, STDs, HIV/AIDS, lack of safe green space, etc., are more typically known to affect the populations not reached by this survey.

Similarities between the results of this current survey and the survey conducted for the 2013 CHNA are worth noting. In both surveys, respondents identified the same top six indicators as needs in the community. The heavy traffic/long commutes, stress/living in a high-pressure area and chronic diseases such as obesity, diabetes, heart disease and hypertension were rated as the top community health needs.

Qualitative Analysis Results

Participants were asked free answer questions regarding additional problems in the community, the strength and resources available in the community, as well as what additional services and resources are needed in the community. The answers were thematically analyzed according to the Healthy People 2020 five key areas of social determinants of health[1]:

1. **Economic stability**, which addresses social issues like poverty, employment, food security and housing stability
2. **Education**, which is measured by high school graduation rates, enrollment in higher education, language and literacy, as well as early childhood education and development
3. **Social and community context**, which speaks of social cohesion, civic participation, discrimination, equity, and incarceration
4. **Health and health care**, which covers access to primary care, access to health care and health literacy
5. **Neighborhood and built environment,** which refers to healthy foods, housing quality, crime, violence, and other environmental conditions

Table 6 below showcases the additional problems community members face. The most mentioned issues in the community are lack of access to quality, nutritious food items, lack of affordable, quality education, the proliferation of mental health issues and lack of mental health care, as well as the pollution and declining air quality.

Additional Problems in the Community	
Economic Stability	
• Quality/Nutritious food items (19) • Homelessness (7) • Affordable housing (7)	• Unemployment/Low income (7) • Poverty (3)
Education	
• Affordable and quality education (12)	
Social and Community Context	
• Drugs, guns, gangs, crime (12) • Positive activities for teens (7)	• High stress levels (4) • Language barriers (3)
Health and Health Care	
• Mental health issues and mental health care (18) • Lack of access to health care (9)	• Lack of information about health care (6) • Health insurance (5)
Neighborhood and Built Environment	
• Pollution/Air Quality (28) • Availability and cost of public transportation (9) • Smoking (8)	• Allergens, mosquitoes, ticks, pollen, mold, etc. (7) • Water quality (5) • Lack of gyms, fitness/health clubs (5)

Table 6. Additional Problems in Community

Note: Numbers in parentheses indicate number of times issue was mentioned

Participants were given the opportunity to identify the strengths of their community and available resources in the community. Table 7 displays their responses. The presence of community centers was mentioned numerous times, as were urgent care centers, parks, walking and biking trails, sports centers, and public transportation.

[1] Department of Health and Human Services. (2016). Social Determinants of Health. *Healthy People*. Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

Strengths and Resources Available in the Community	
Social and Community Context	
• Community Centers (135) • Religious organizations & houses of worship (8) • Day care (2)	
Health and Health Care	
• Urgent care centers (26) • Health fairs & screenings (8)	
Neighborhood and Built Environment	
• Recreation parks, walking & biking trails (229) • Community sports centers (120) • Public transportation (101) • Gyms/exercise clubs (58)	• Community pools (21) • Libraries (10) • Proximity to services (4)

Table 7. Strengths and Resources Available in the Community
Note: Numbers in parentheses indicate number of times issue was mentioned

Finally, participants were asked what additional services and resources were needed in the community. Table 8 below outlines their needs. In terms of economic stability, respondents indicated the need for affordable quality food and affordable housing. For health care, affordable and accessible mental health care was mentioned the most, followed by affordable health care in general. As for the neighborhood and built environment, affordable public transportation and affordable gyms/health clubs were mentioned the most.

Additional Services and Resources Needed in the Community	
Economic Stability	
• Affordable quality food (17) • Affordable housing (13)	
Social and Community Context	
• Affordable day care (4)	
Health and Health Care	
• Affordable, accessible mental health care (33) • Affordable health care (27) • Community health fairs/screenings (18)	• Longer office hours for doctors and more weekend/night doctors (12) • Dental care (11) • Health education(10)
Neighborhood and Built Environment	
• Transportation (28) • Affordable gyms/health clubs (27)	• Park and recreation areas (20) • More walking/biking paths (7)

Table 8. Additional Services and Resources Needed in the Community
Note: Numbers in parentheses indicate number of times issue was mentioned

Healthy Montgomery Community Conversations

Healthy Montgomery, Montgomery County's community health improvement process, conducted a series of focus groups across the county to investigate the community's resources and needs from the residents' perspective. They conducted 15 focus groups, deemed "Community Conversations", with populations varying in age, race, language, disabilities, and more (Table 9).

The community health needs identified through the Healthy Montgomery Community Conversations include but are not limited to:

- **Health Care Access.** Residents identified the increasing costs of health care and medicines as a barrier to seeking health care.
- **Mental Health Services.** Participants voiced their concerns about lack of culturally and linguistically appropriate mental health care and resources.
- **Language and Culture.** Language and cultural barriers were identified as a concern when seeking health care.
- **Health Literacy**. Lack of access to information about disease management, navigating the complicated health care system, and the rollout of the Affordable Care Act were discussed at various focus groups.
- **Transportation.** Access to affordable public transportation and safe biking trails were frequently mentioned.
- **Food Access.** The high cost of healthy food, small numbers of farmers' markets, and too many fast food restaurants were identified as challenges in the community.
- **Safe Green Space.** While parks and recreation centers may be available, their accessibility was identified as an issue.

The results of the Community Conversations are similar to Adventist HealthCare's survey findings. The needs identified in both sets correspond.

Community Conversation Populations
General Public
People with Disabilities
Latino Community
Youth
Seniors
Homeless Women
Homeless Men
Asian American Health Initiative
African-American Health Program, African Advisory Group, Caribbean Advisory Group
Korean Community
Chinese Community
Faith Community
Vietnamese Community

Table 9. Healthy Montgomery Community Conversation Target Populations

Section IV: Findings

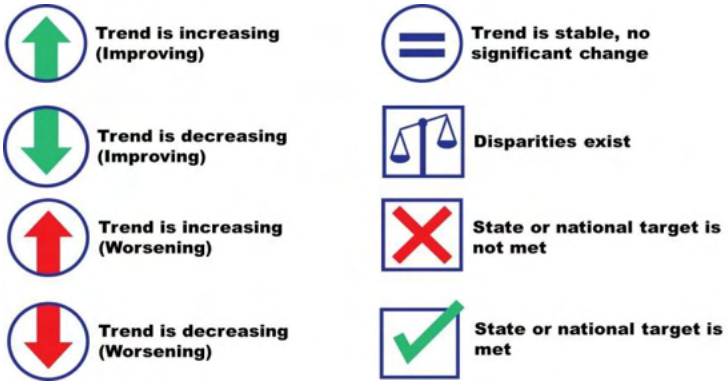
Part B:
Secondary Data Findings

Chapter 1: Cancer

Cancer

KEY FINDINGS

- From 2009–2013, statewide incidence rates for bladder, thyroid, and liver & bile duct cancers increased.
- From 2009-2013, statewide incidence rates for prostate, cervical, and ovarian cancers decreased.
- From 2009–2013, the state mortality rates for prostate, colorectal, and lung cancers decreased.
- From 2009–2013, statewide mortality rates increased for uterine, bladder, and liver & bile duct cancers.
- Neither Prince George's County nor Maryland have met SHIP 2017 or HP 2020 targets for overall age-adjusted cancer mortality rates.
- In both counties, whites and Blacks have the highest rates of cancer mortality, while Hispanics and Asian/Pacific Islanders have the lowest.
- Overall, breast cancer and cervical cancer incidence rates have been slowly increasing in Prince George's County.
- For breast cancer, Black women have the highest mortality rate compared to other racial/ethnic groups in both counties. For prostate cancer, Black men have the highest incidence and mortality rates compared to other racial groups. For cervical cancer, the incidence rate is highest among Hispanic women in Montgomery County.
- Colorectal cancer is more common in men than in women and more common in Blacks than other racial/ethnic groups, in both counties. Colorectal cancer mortality rates follow a similar trend. However, women are more likely to receive a colorectal cancer screening, as compared to men.
- Lung cancer and prostate cancer rates have been decreasing in Montgomery County, Prince George's County, and Maryland since 2009.
- Both Montgomery County and Prince George's County meet the HP 2020 target for lung cancer mortality.
- The incidence of skin cancer, while relatively stable, is highest in whites.

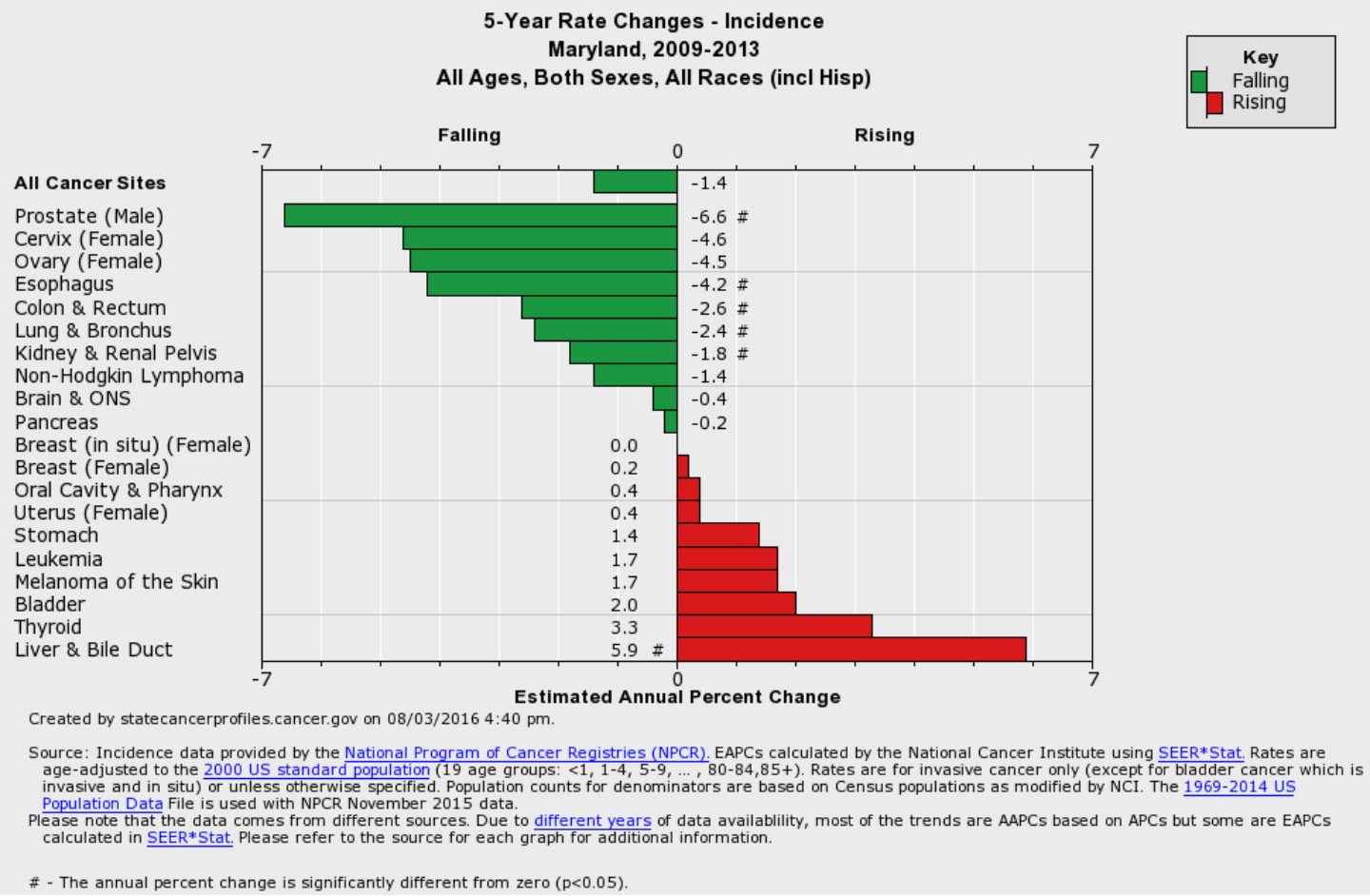


Cancer

Impact

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other tissues. Cancerous cells are also called malignant cells. If the spread is not controlled, it can result in death. There are many different kinds of cancer. Cancer can develop in almost any organ or tissue, such as the lung and/or bronchus, colon, breast, skin, bones, or nerve tissue. There are many causes of cancer, including benzene and other chemicals, drinking excess alcohol, environmental toxins, excessive sunlight exposure, genetic problems, obesity, radiation, viruses, and other unknown causes.[1]

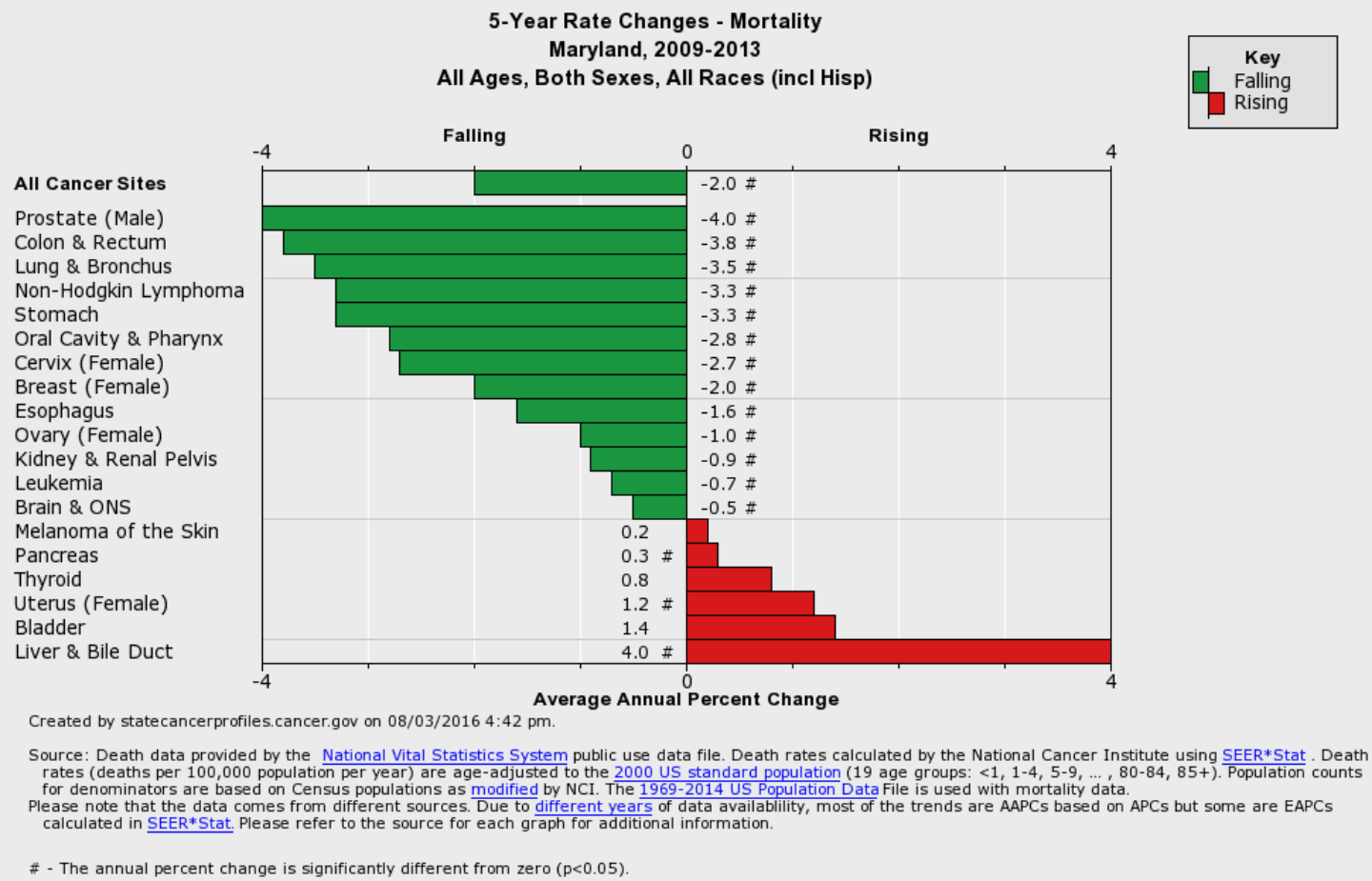
Cancer at the State Level



(Source: State Cancer Profiles, 2013)

From 2009–2013, the incidence of certain types of cancer decreased in the state, while it rose for other types. Of particular interest, the largest decreases in incidence were seen in prostate, cervical, and ovarian cancers, while the largest increases in incidence were seen in cancers of the bladder, thyroid, and liver & bile duct cancers.

[1] U.S. Department of Health and Human Services (DHHS), National Institute of Health (NIH), & National Cancer Institute (NCI). (2015). What is cancer?. *National Cancer Institute*. Retrieved from: https://www.cancer.gov/about-cancer/understanding/what-is-cancer



(Source: State Cancer Profiles, 2013)

From 2009–2013, the state mortality rates for prostate, colorectal, and lung cancers showed the greatest decreases; However, mortality rates increased for uterine, bladder, and liver bile duct cancers in the state of Maryland during that time.

Age-Adjusted Invasive Cancer Incidence Rates for the 10 Primary Sites with the Highest Rates within State- and Sex-Specific Categories

State vs. National Rates: 2009–2013, Male and Female , Maryland *† Rates per 100,000 ‡			
	Site	State	U.S.
1	Prostate	135.0	123.2
2	Female Breast	130.2	123.4
3	Lung and Bronchus	59.2	62.5
4	Colon and Rectum	37.6	40.6
5	Corpus and Uterus, NOS	25.9	25.6
6	Melanomas of the Skin	21.0	20.3
7	Urinary Bladder	20.4	20.7
8	Non-Hodgkin Lymphoma	17.7	19.1
9	Thyroid	15.0	14.0
10	Kidney and Renal Pelvis	14.9	16.0

Notes:
† Excludes basal and squamous cell carcinomas of the skin excluding occurrences on genital organs, and in situ cancers excluding urinary bladder
‡ Age-adjusted rates to the 2000 U.S. standard population (19 age groups – Census P25-1130). Rates are suppressed and not ranked if the stratified population is below 50,000 or with case counts under 16.

(Source: United States Cancer Statistics (USCS), 2013)

From 2009-2013, the state of Maryland's invasive cancer specific incidence rates (per 100,000) were better or lower than the National rate for lung and bronchus cancers, colon and rectum cancers, Non-Hodgkin Lymphoma, and was about the same for Urinary and Bladder cancers and Corpus and Uterus, NOS. On the other hand, the state of Maryland had higher rates than the national rates for Prostate, Female Breast, and Melanomas of the Skin.

Age-Adjusted Cancer Death Rates for the 10 Primary Sites with the Highest Rates within State- and Sex-Specific Categories

State vs. National Rates: 2009–2013, Male and Female , Maryland * * Rates per 100,000 †			
	Site	**State**	**U.S.**
1	Lung and Bronchus	44.5	46.0
2	Female Breast	23.0	21.5
3	Prostate	21.3	20.7
4	Colon and Rectum	14.9	15.1
5	Pancreas	11.6	10.9
6	Ovary	7.5	7.5
7	Leukemia	6.6	6.9
8	Liver and Intrahepatic Bile Duct	6.2	6.1
9	Non-Hodgkin Lymphoma	5.4	6.0
10	Corpus and Uterus, NOS	5.3	4.5

Notes
*Data are chosen from statewide and metropolitan area cancer registries that satisfy data quality requirements for all invasive cancer sites combined. Rates include approximately 99.0% of the U.S. population.
† Excludes basal and squamous cell carcinomas of the skin excluding occurrences on genital organs, and in situ cancers excluding urinary bladder

(Source: United States Cancer Statistics (USCS), 2013)

From 2009–2013, the state of Maryland's cancer specific death rates (per 100,000) were better or lower than the National rates for lung and bronchus, leukemia and Non-Hodgkin Lymphoma, with rates being fairly comparable between state and U.S. for colon and rectum, ovary, and liver and intrahepatic bile duct. On the other hand, the state of Maryland had higher death rates than the U.S. for female breast, prostate, pancreas, and corpus and uterus, NOS.

Cancer at the County Level

Montgomery County has consistently met the SHIP and HP 2020 targets for age-adjusted death rates due to cancer since 2006. Prince George's County, however, has not. While the age adjusted death rates has decreased overall for Prince George's County, they have not yet dropped to the targets identified by SHIP and HP 2020. Maryland as a whole, has met the SHIP and HP 2020 target for 2009–2013 (Figure 1).

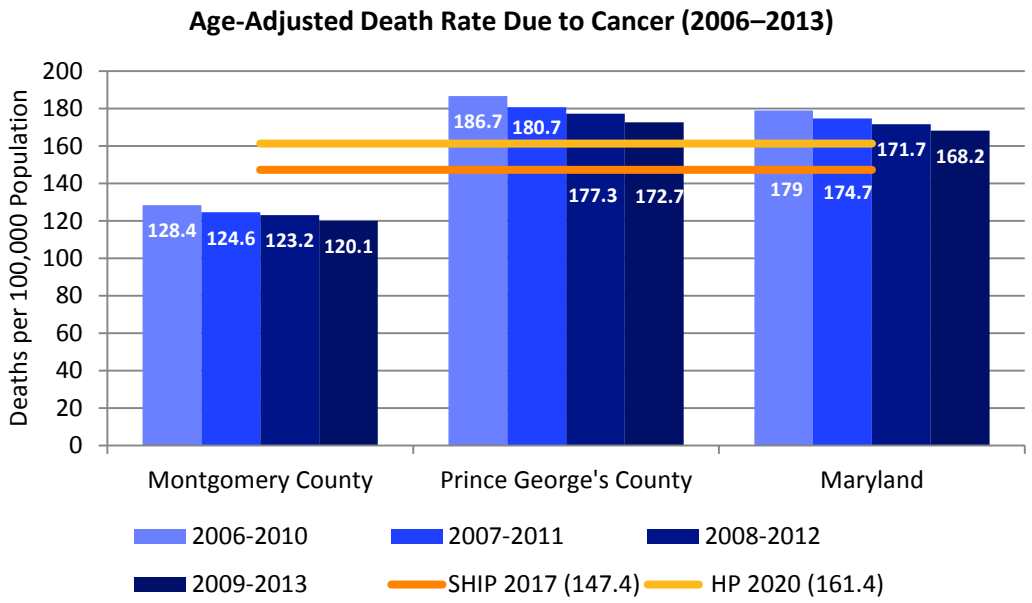


Figure 1. Age-Adjusted Death Rate per 100,000 Population due to Cancer in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

For both Montgomery and Prince George's County, males have a higher age-adjusted death rate as compared to women, with Prince George's County having higher adjusted death rates overall (Figure 2 and Figure 3).

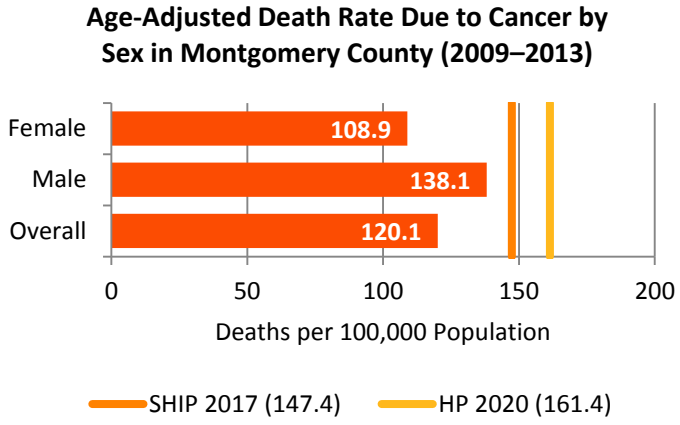


Figure 2. Age-Adjusted Death Rate per 100,000 Population due to Cancer by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

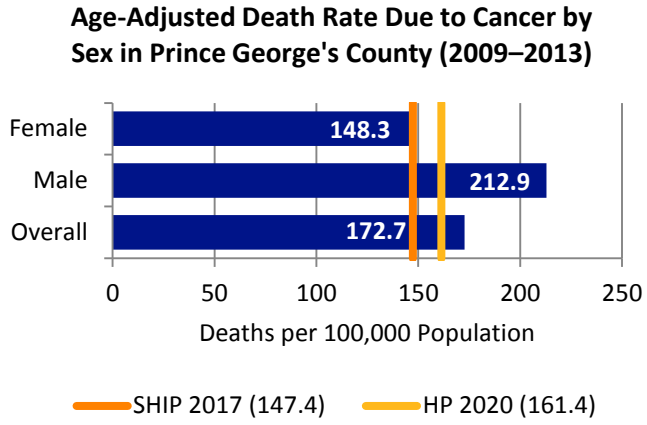


Figure 3. Age-Adjusted Death Rate per 100,000 Population due to Cancer by Sex in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

When examining death rates due to Cancer in Montgomery County, Blacks have the highest death rates, followed by whites, Asian/Pacific Islander, and then Hispanic. In Prince George's County, the picture is slightly different. The highest death rates due to Cancer are attributed to whites, followed closely by Blacks, then Hispanic, and then Asian/Pacific Islander (Figure 4 and Figure 5).

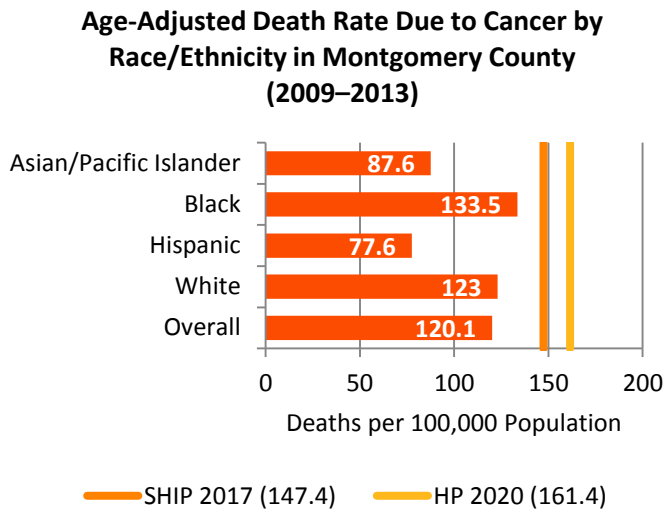


Figure 4. Age-Adjusted Death Rate per 100,000 Population due to Cancer by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

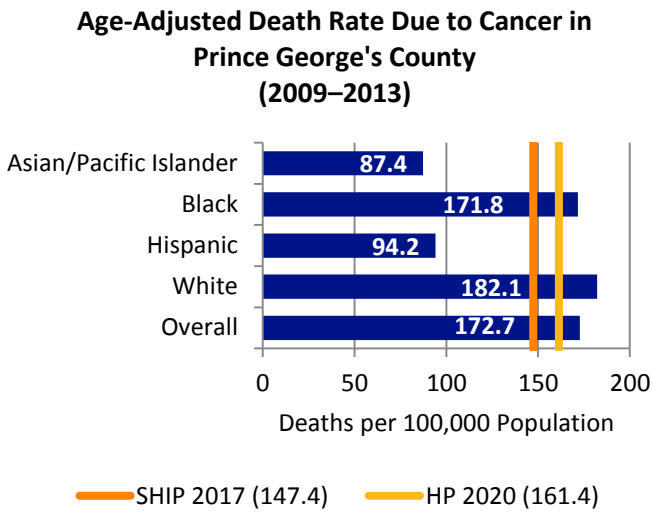


Figure 5. Age-Adjusted Death Rate per 100,000 Population due to Cancer by Race/Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

The number of Medicare Beneficiaries that were treated in Maryland as a whole has decreased since 2012 to 2014, demonstrating similar trends in both Montgomery and Prince George's County (slightly level for the past two years). Montgomery County has demonstrated a larger decrease in percentage since 2012 than Prince George's County, however, in 2014 the percentages of Medicare Beneficiaries that were treated for Cancer in both counties was roughly the same (Figure 6).

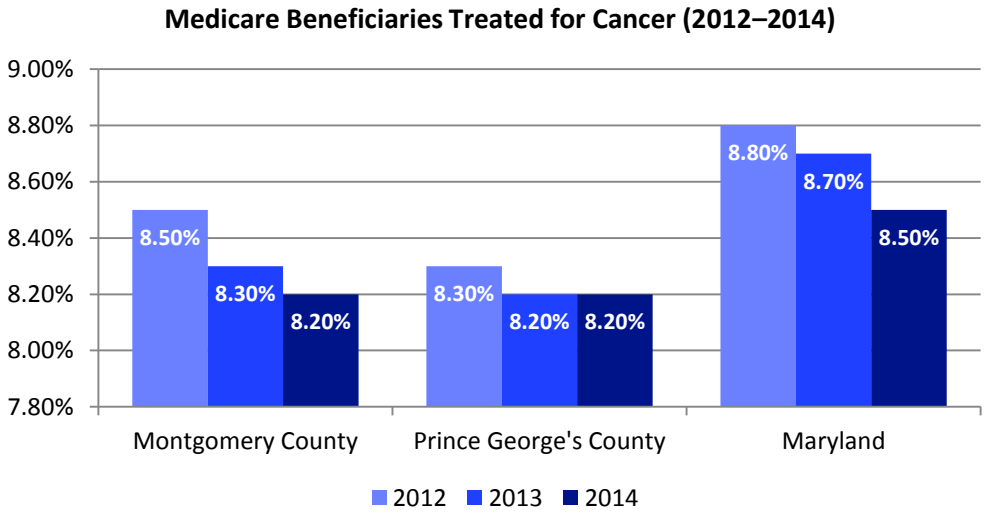


Figure 6. Percent of Medicare Beneficiaries that were Treated for Cancer in Montgomery County, Prince George's County, and Maryland, 2012–2014.
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

1.1 Breast Cancer

Incidence

Montgomery County has maintained moderately stable incidence rates of breast cancer, while Prince George's County and Maryland overall have demonstrated a slight increasing trend in incidence (Figure 7).

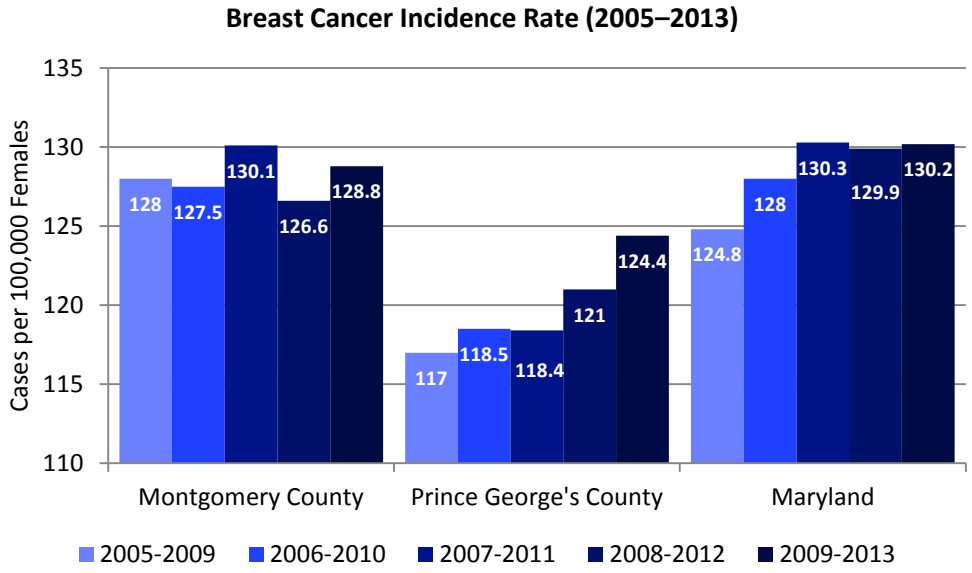


Figure 7. Age-Adjusted Incidence Rate for Breast Cancer in Cases per 100,000 Females in Montgomery County, Prince George's County, and Maryland, 2005–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

When looking at breast cancer incidence rates by Race/Ethnicity in Montgomery County as compared to Prince George's County, we can see that Montgomery County has a slightly higher incidence rate overall. With that being said, in Montgomery County, the racial/ethnic group with the highest incidence rate for breast cancer include both white and Black. As compared to Prince George's County, the group with the highest incidence rate is Black, with whites having a much lower incidence rate, and followed by Hispanic (Figure 8 and Figure 9).

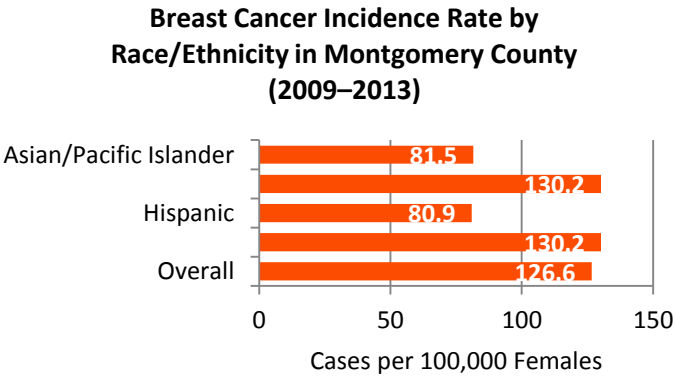


Figure 8. Age-Adjusted Incidence Rate for Breast Cancer in Cases per 100,000 Females by Race & Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

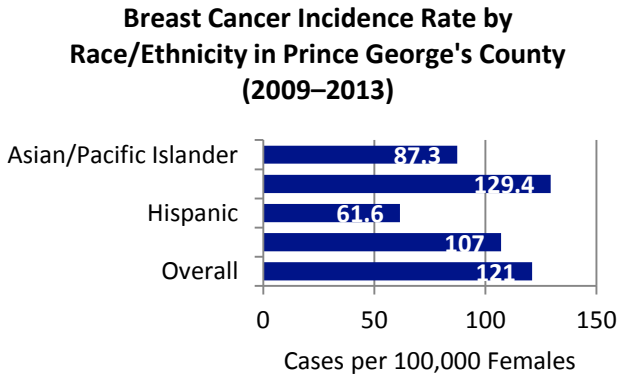


Figure 9. Age-Adjusted Incidence Rate for Breast Cancer in Cases per 100,000 Females by Race & Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

Mortality

Both counties and the state have been on a general downward trend in recent years, including PG County (other than a bump from 2007–2011). The state of Maryland and Montgomery County have achieved the HP 2020 Target for age adjusted death rates due to breast cancer for the 2009–2013 time period. Prince George's County continues to decrease, but still is above the target. Montgomery County has surpassed the target since 2006 consistently (Figure 10).

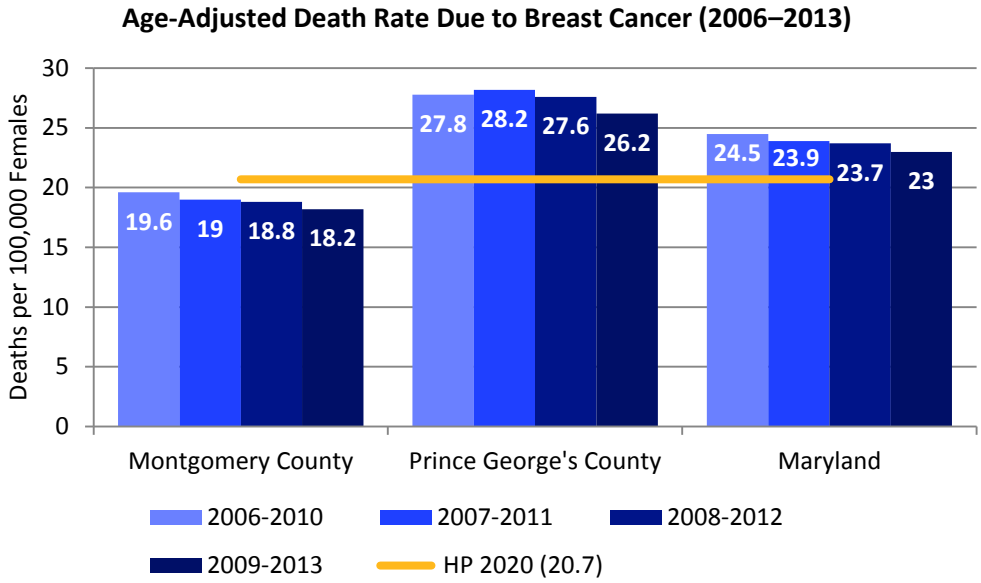


Figure 10. Age-Adjusted Death Rate per 100,000 Females due to Breast Cancer in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

When evaluating death rates due to Breast Cancer by Race/Ethnicity, for Montgomery County, the overall rate met the HP 2020 target. All of the racial categories in Montgomery County, except Black met the target. For Blacks in Montgomery County, the death rate is drastically higher than that of any other racial group. In Prince George's County, none of the categories met the HP 2020 target. Blacks also have a higher death rate than their white counterparts in this county (Figure 11 and Figure 12).

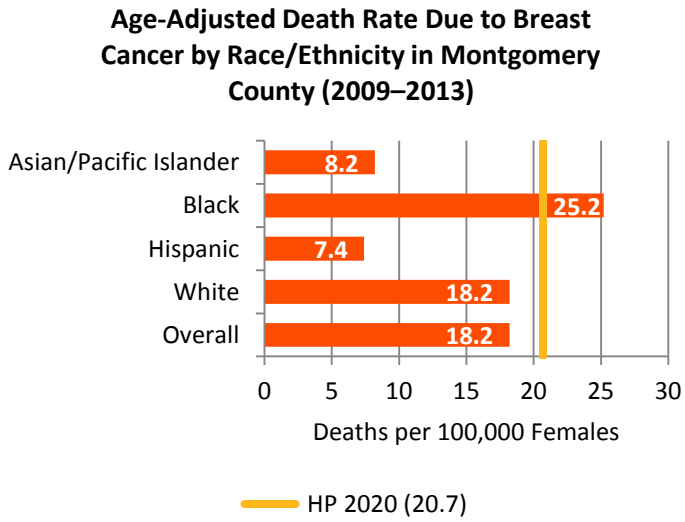


Figure 11. Age-Adjusted Death Rate per 100,000 Females by Race & Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

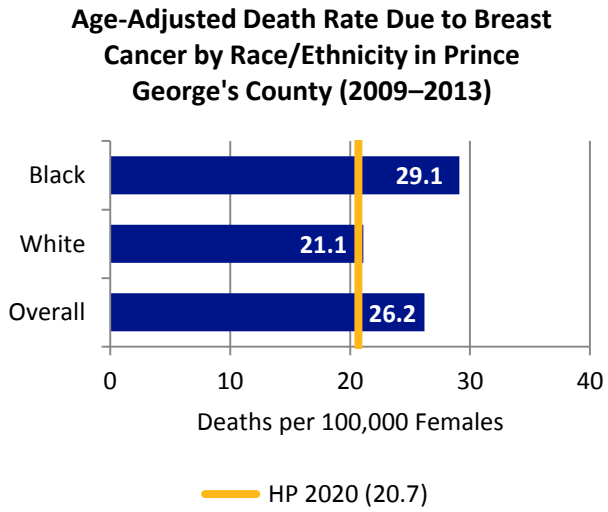


Figure 12. Age-Adjusted Death Rate per 100,000 Females by Race & Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

Screening

Since 2012, the total percentage of women aged 50 and over who have had their recommended Mammogram in the past two years has decreased in both Montgomery and Prince George's County. Prince George's County has screened a slightly larger percentage than Montgomery County in 2014 (Figure 13).

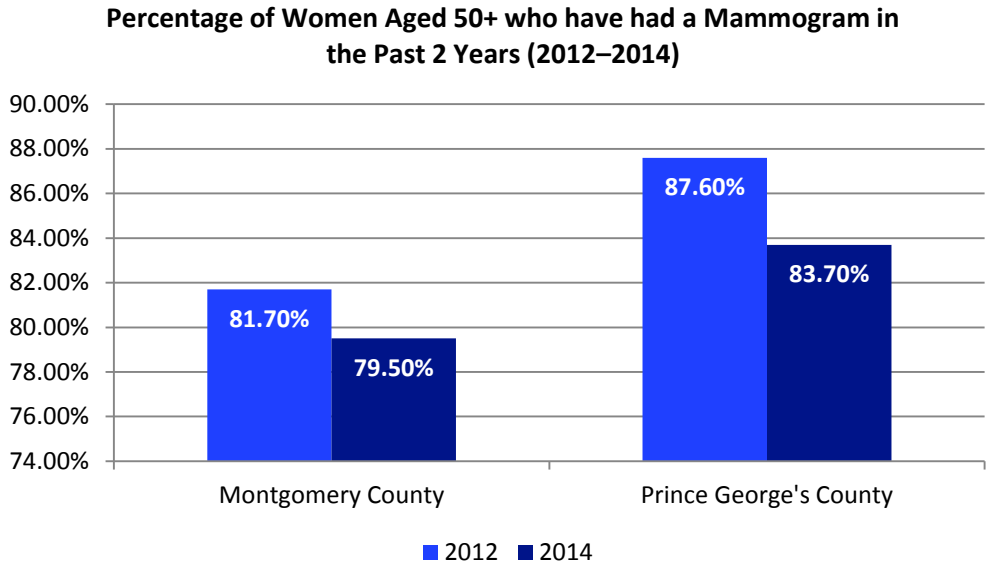


Figure 13. Percentage of Women aged 50 and over who have had a Mammogram in the Past Two Years in Montgomery and Prince George's Counties, 2012–2014.
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

When evaluating screening by age, in Montgomery County, there was a greater percentage of 65+ year olds who received a mammogram as compared to ages 50–64. In Prince George's County, the percentages of individuals in both 65+ and 50–64 year old, were pretty consistent with the overall rates, all being roughly 83–84.0 percent (Figure 14 and Figure 15).

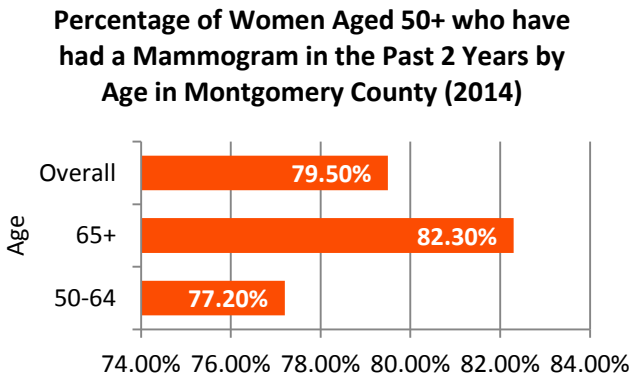


Figure 14. Percentage of Women aged 50+ who have had a Mammogram in the Past Two Years by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

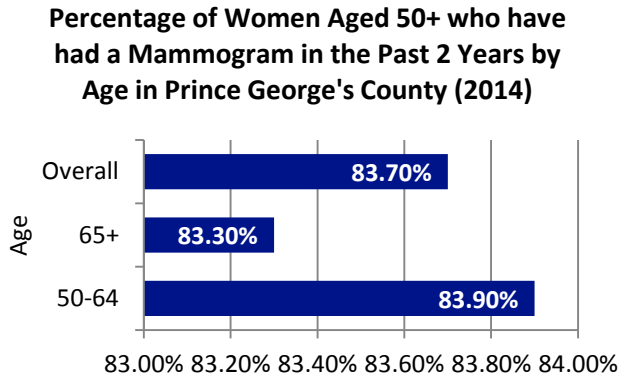


Figure 15. Percentage of Women aged 50+ who have had a Mammogram in the Past Two Years by Age in Prince George's County, 2014
(Source: PGC Health Zone, 2014)

When evaluating mammography by Race/Ethnicity, in 2014, Montgomery County demonstrated the highest percentage group as being Hispanic, followed by whites and Black (at about the same percentage), then Asian and then Other. For Prince George's County, the highest percentage of mammography was demonstrated in Blacks, followed by Hispanics, then whites, Asians, and then other (Figure 16 and Figure 17).

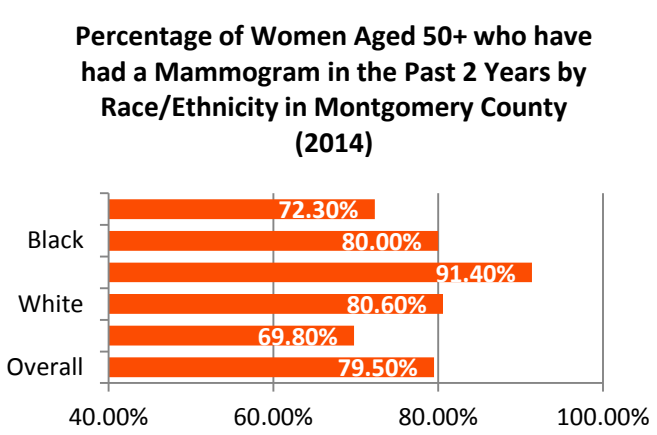


Figure 16. Percentage of Women aged 50 + who have had a Mammogram in the Past Two Years by Race/Ethnicity in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

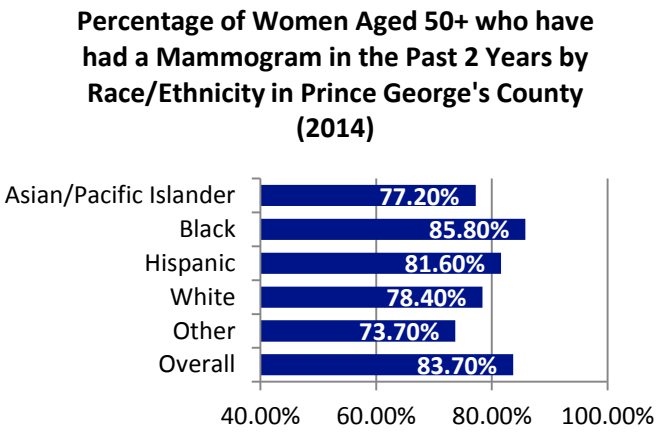


Figure 17. Percentage of Women aged 50+ who have had a Mammogram in the Past Two Years by Race/Ethnicity in Prince George's County, 2014
(Source: PGC Health Zone, 2014)

1.2 Lung Cancer

Incidence

For the state of Maryland, Montgomery County, and Prince George's County, the incidence rates of lung and bronchus cancer have decreased since 2006. Montgomery and Prince George's Counties both boast lower incidence rates than Maryland (Figure 18).

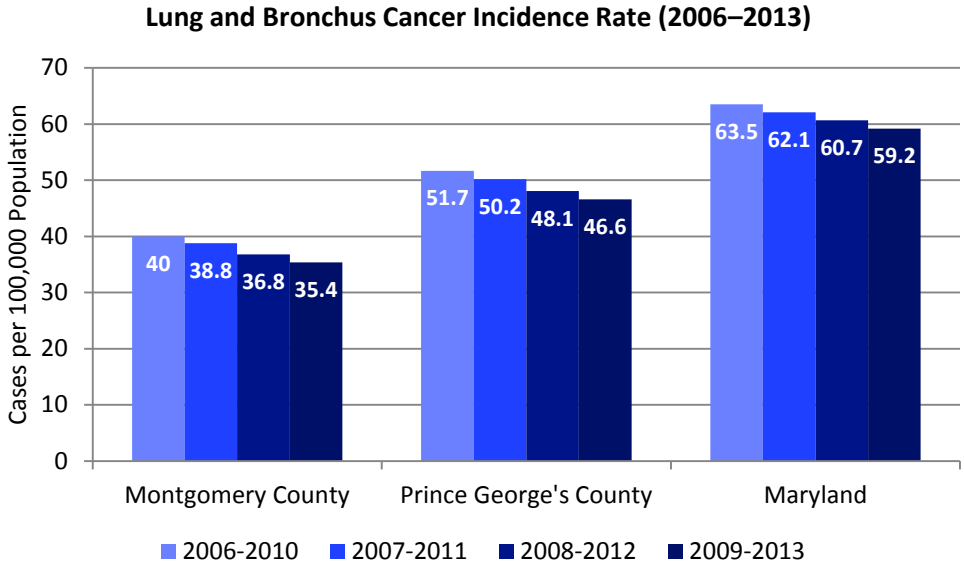


Figure 18. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

Incidence rates of lung and bronchus cancer by sex show a slightly different picture. In Montgomery County and Prince George's County, men have a higher incidence rate than women due. This gap is much larger in Prince George's County than in Montgomery County (Figure 19 and Figure 20).

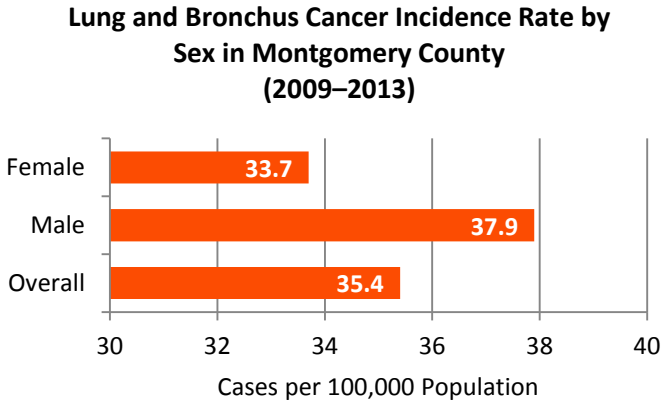


Figure 19. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

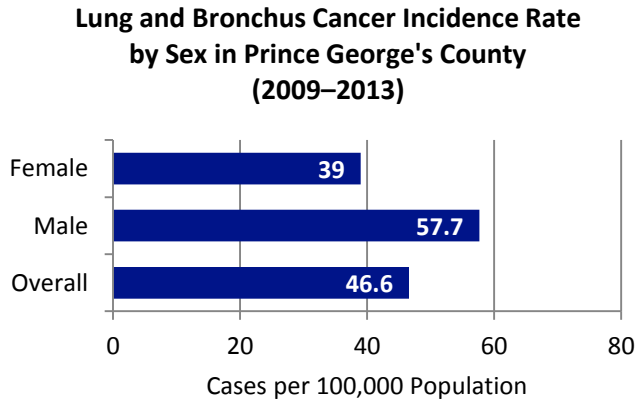


Figure 20. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population by Sex in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

In Montgomery County, when examining incidence rates by race/ethnicity, Blacks have the highest incidence rate (also being higher than the overall incidence rate in the county) followed by whites and then Hispanics. In Prince George's

County, whites have the highest incidence rate (also higher than the overall incidence rate), this is followed by Blacks and then Hispanics (Figure 21 and Figure 22).

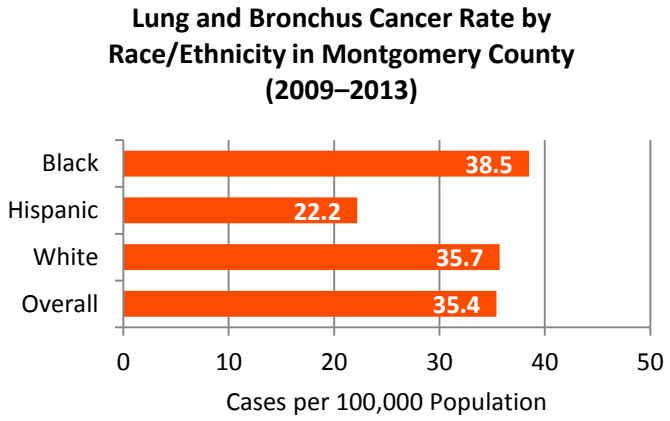


Figure 21. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population by Race/Ethnicity in Montgomery County, 2009–2013. (Sources: Healthy Montgomery. 2013)

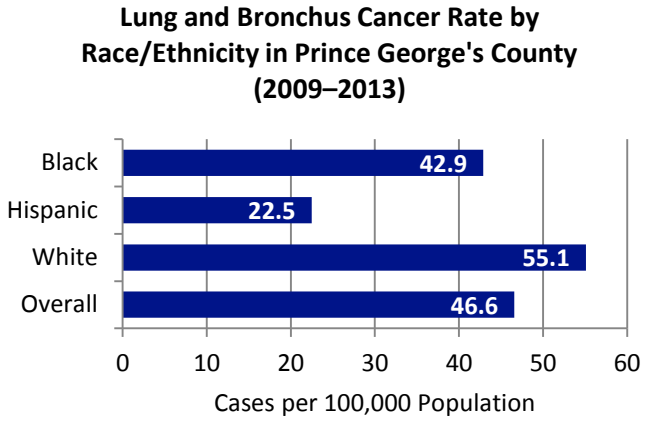


Figure 22. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population by Race/Ethnicity in Prince George's County, 2009–2013. (Source: PGC Health Zone, 2013)

Mortality

Maryland as a state has demonstrated decreased death rates due to lung cancer since 2006–2012 until now. The state of Maryland has me the HP 2020 target based on the 2008–2012 date. Montgomery County and Prince George's County have also both demonstrated decreased death rates, and have both achieved the HP 2020 target since 2006. Montgomery County has much lower death rates due to lung cancer as compared to Prince George's County and the rest of the State (Figure 23).

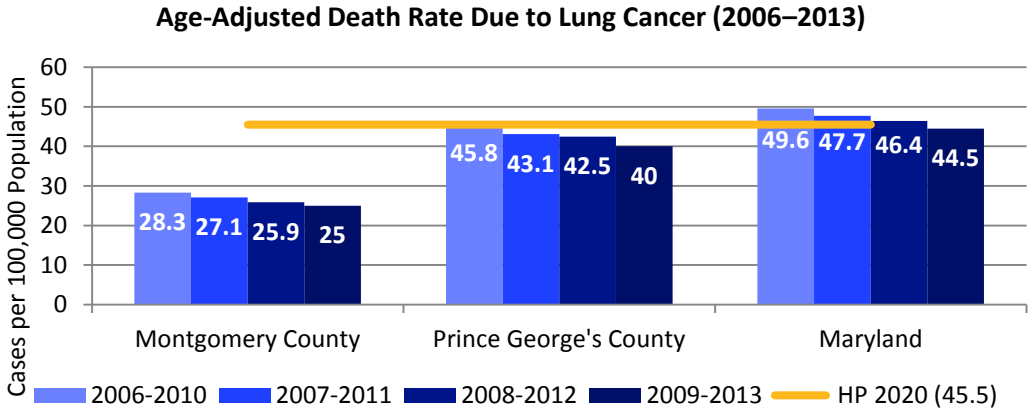


Figure 23. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

Death rates due to Lung Cancer in Montgomery County, when broken down by sex, show that male and female rates have met the HP 2020 target, with men having slightly higher death rates than women. In Prince George's County, female and overall death rates met the HP 2020 goals, but the death rates for men were much higher than the target (Figure 23 and Figure 25).

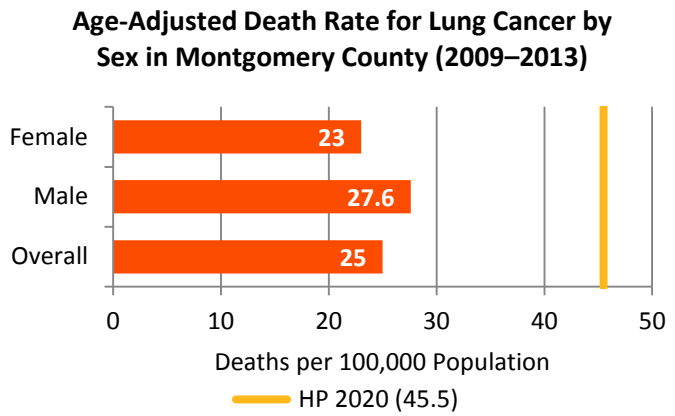


Figure 24. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

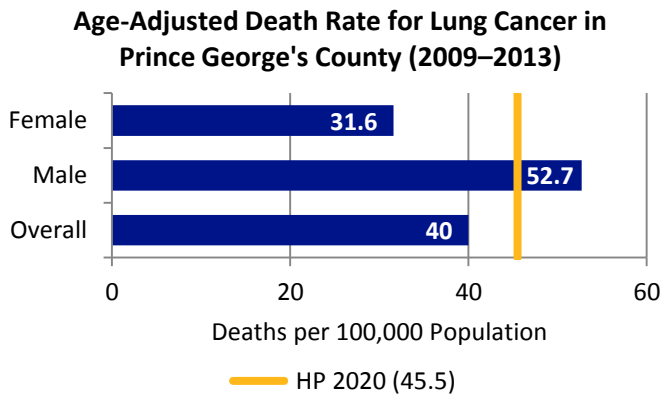


Figure 25. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population by Sex in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

Death rates due to Lung Cancer in Montgomery County, when broken down by race/ethnicity, indicate that all categories have surpassed the HP 2020 target. Blacks have the highest death rates (which are also higher than the overall), then followed by whites, Asian/Pacific Islander and then Hispanics. In Prince George's County, all categories surpassed the HP 2020 target besides whites. They had the highest death rate. This was followed by Blacks, Asian/Pacific Islander and Hispanics (Figure 26 and Figure 27).

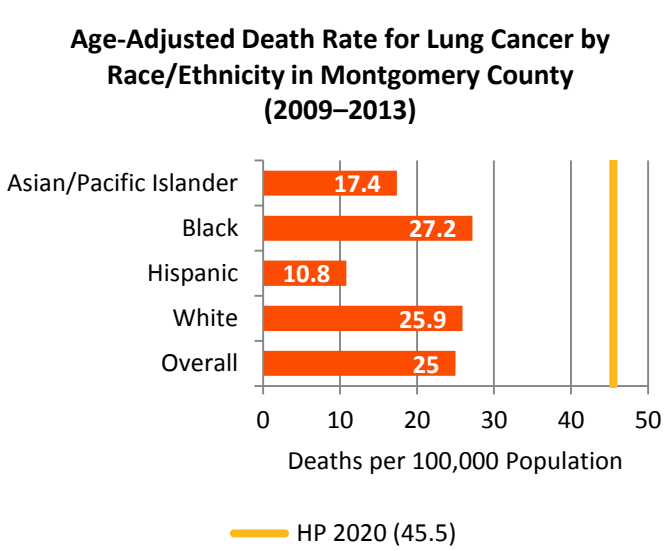


Figure 26. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population County by Race/Ethnicity in Montgomery, 2009–2013.
(Sources: Healthy Montgomery. 2013)

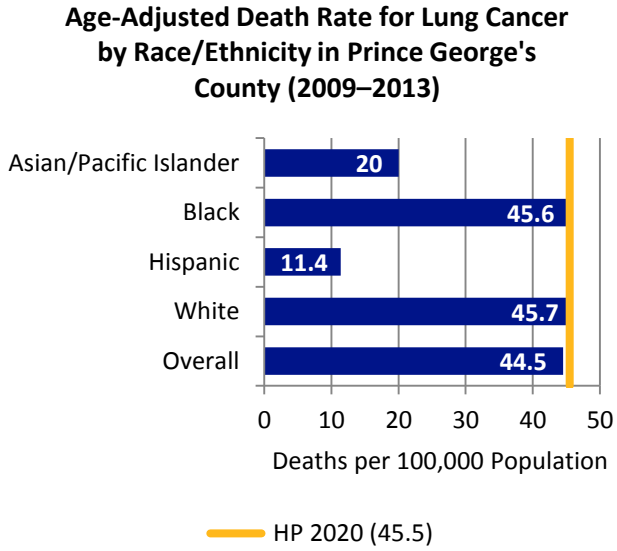


Figure 27. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population County by Race/Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

1.3 Colorectal Cancer

Incidence

Colorectal Cancer incidence rates have declined in the state of Maryland since 2006. The same is true for Montgomery and Prince George's County. For the 2009–2013 reporting period, Montgomery County, Prince George's County, and Maryland as a whole have met the HP 2020 target. Montgomery County has fairly lower incidence rates for colorectal cancer as compared to Prince George's County or Maryland (Figure 28).

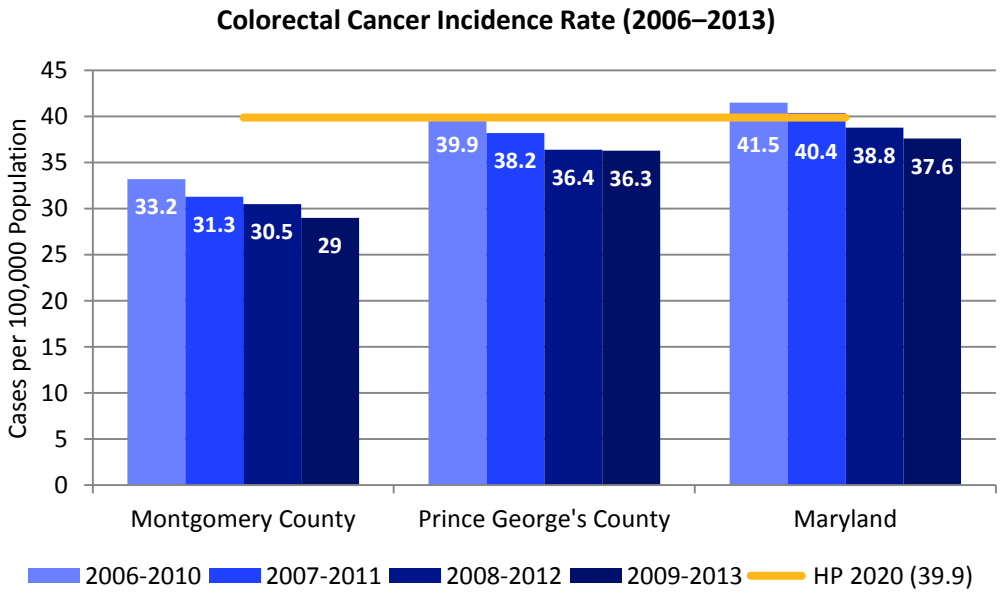


Figure 28. Age-Adjusted Incidence Rate for Colorectal Cancer in Cases per 100,000 Population in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

When looking at incidence rates broken down by sex, males in both counties demonstrated higher incidence for colorectal cancer than did females. Montgomery County rates have met the HP 2020 target. In Prince George's County, the HP 2020 target was met for female and overall rates, but the male rates did not meet it (Figure 29 and Figure 30).

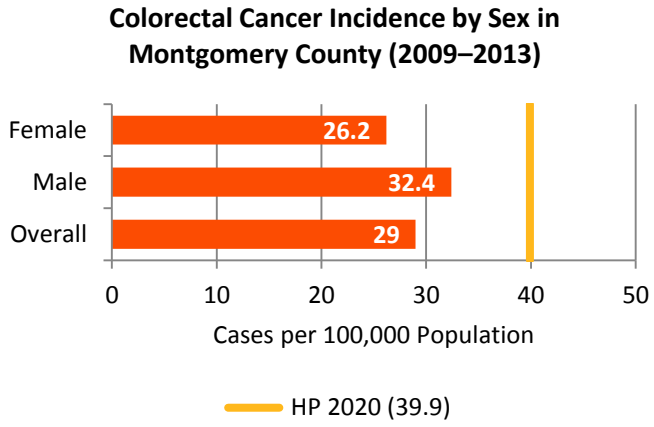


Figure 29. Colorectal Cancer Incidence Rate in Cases per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

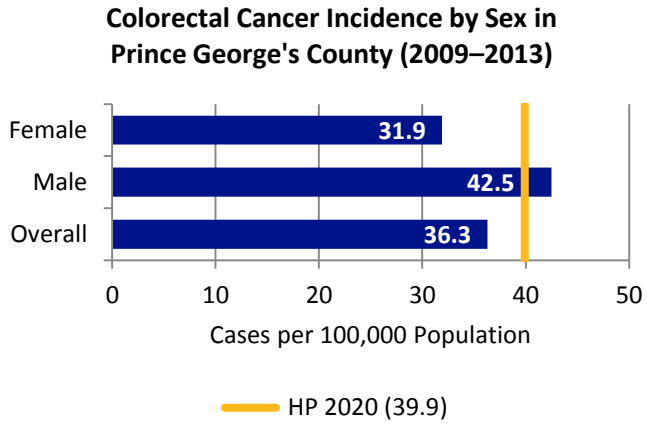


Figure 30. Colorectal Cancer Incidence Rate in Cases per 100,000 Population by Sex in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

Colorectal Cancer incidence rates in Montgomery County when broken down by race/ethnicity, still demonstrate success in achieving the HP 2020 target for all of the subcategories. The same is true for Prince George's County. In both Montgomery and Prince George's County, Blacks have the highest incidence rates, followed by whites, and Hispanics (Figure 31 and Figure 32).

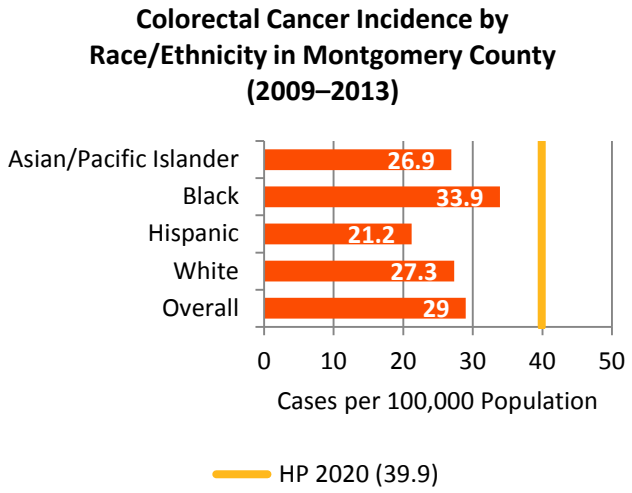


Figure 31. Colorectal Cancer Incidence Rate in Cases per 100,000 Population by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

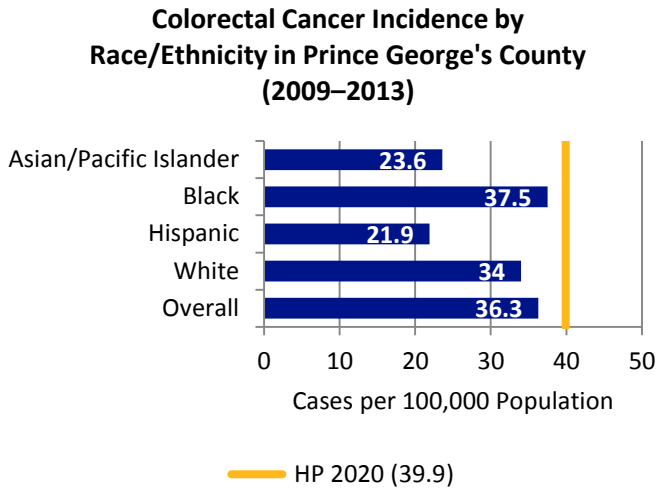


Figure 32. Colorectal Cancer Incidence Rate in Cases per 100,000 Population by Race/Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

Mortality

Death rates due to Colorectal Cancer have decreased in Maryland overall, with Maryland meeting the HP 2020 target for the 2009–2013 reporting period. Montgomery County has the lowest death rates, with the rates decreasing over the years. Montgomery County's rates have surpassed the HP 2020 targets consistently since 2006. Prince George's County, however, has seen a slightly different trend with rates decreasing and then increasing again. The death rates have increased slightly for the 2009–2013 period as compared to the 2008–2012 periods. Prince George's County's rates also have not achieve the HP 2020 targets (Figure 33).

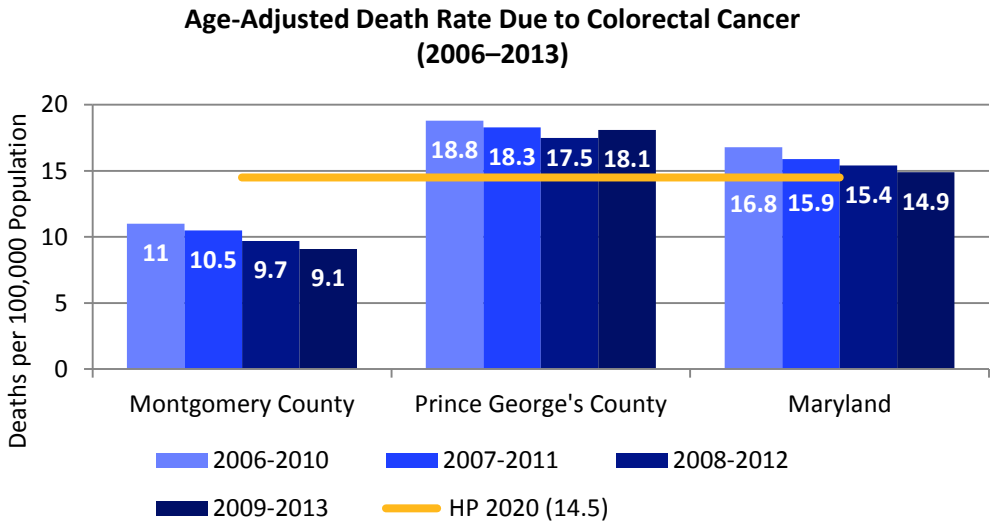


Figure 33. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

Examining death rates due to Colorectal Cancer by sex, in both Montgomery and Prince George's County, males have higher death rates, but males did not meet the HP 2020 target in Prince George's County (Figure 34 and Figure 35).

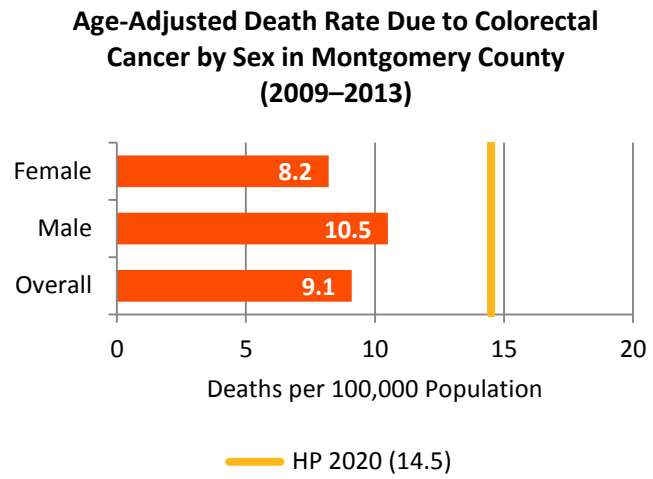


Figure 34. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

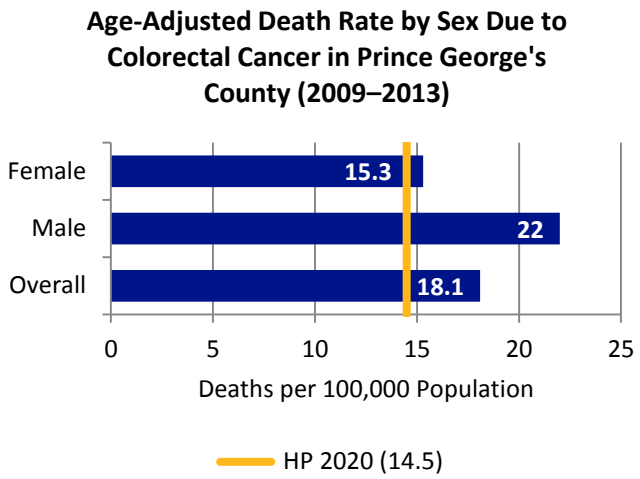


Figure 35. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population by Sex in Prince George's County by Sex, 2009–2013.
(Source: PGC Health Zone, 2013)

Examining death rates due to Colorectal Cancer by race/ethnicity, Blacks in both Montgomery and Prince George's County had the highest death rates as compared to other racial groups. Montgomery County met the HP 2020 target for all subcategories of race/ethnicity. The lowest death rates were seen in Hispanics. For Prince George's County, the HP 2020 target was not met in any category other than Asian/Pacific Islander (Figure 36 and Figure 37).

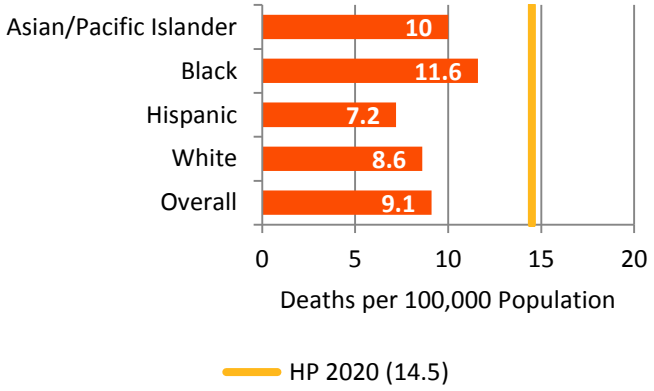


Figure 36. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

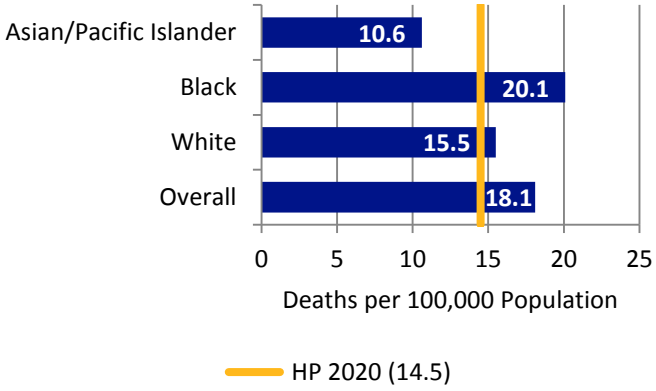


Figure 37. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population by Race/Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

Screening

Montgomery County has demonstrated some increases in the percentage of adults aged 50 and over who have ever had a sigmoidoscopy or colonoscopy exam. Prince George's county has slightly higher percentages (Figure 38).

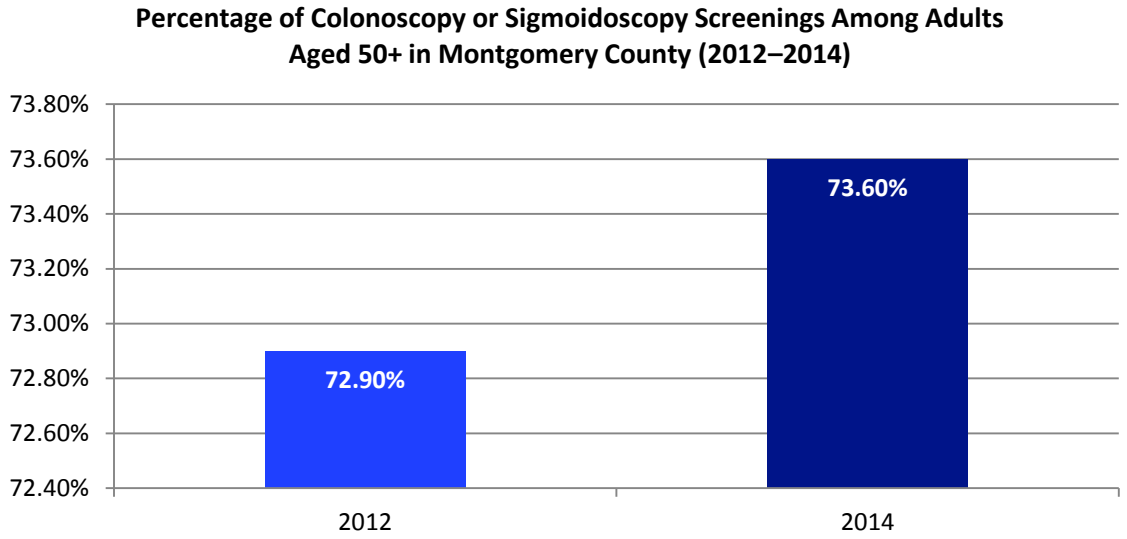


Figure 38. Percentage of Adults aged 50 and Over who have ever had a Sigmoidoscopy or Colonoscopy Exam in Montgomery and Prince George's Counties, 2012–2014.
(Sources: Healthy Montgomery. 2014)

In both Montgomery and Prince George's Counties, adults aged 65+ contributed a larger percentage of colonoscopy or sigmoidoscopy screenings than their 50–64 year old counterparts. Additionally, for both counties, the 65+ groups had higher percentages of screening than the county overall (Figure 39).

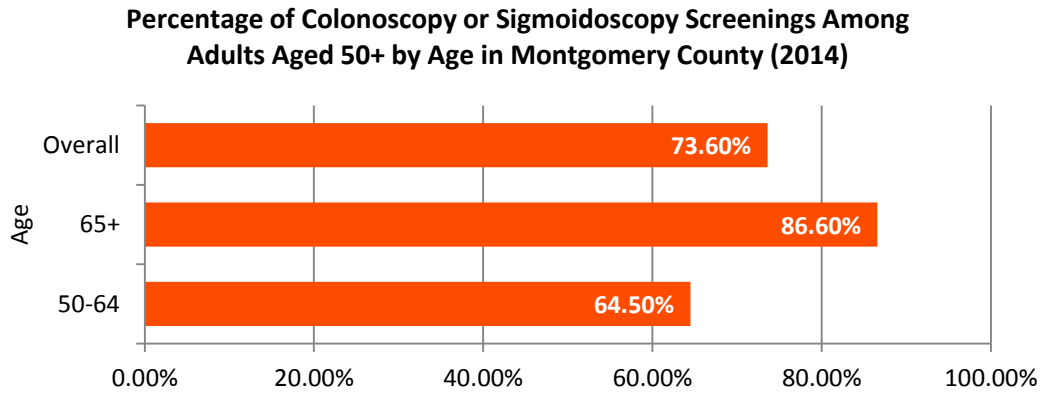


Figure 39. Percentage of Adults aged 50 and over that have ever had a Sigmoidoscopy or Colonoscopy Exam by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

In Montgomery and Prince George's County, there were a higher percentage of females than males to receive the screening. Additionally, females in both counties had higher percentage of screening than the overall percentage (Figure 40 and Figure 41).

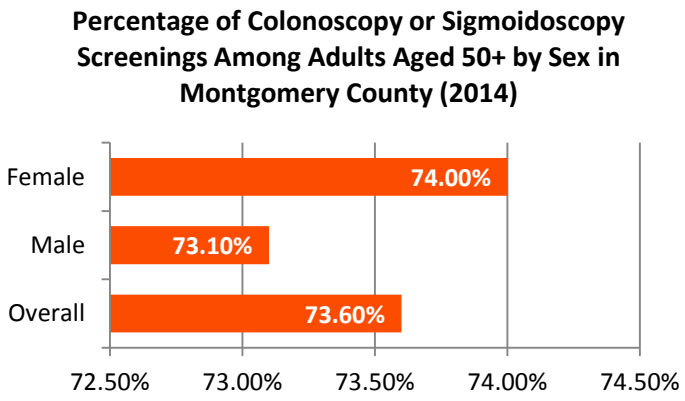


Figure 40. Percentage of Adults aged 50+that have ever had a Sigmoidoscopy or Colonoscopy Exam by Sex in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

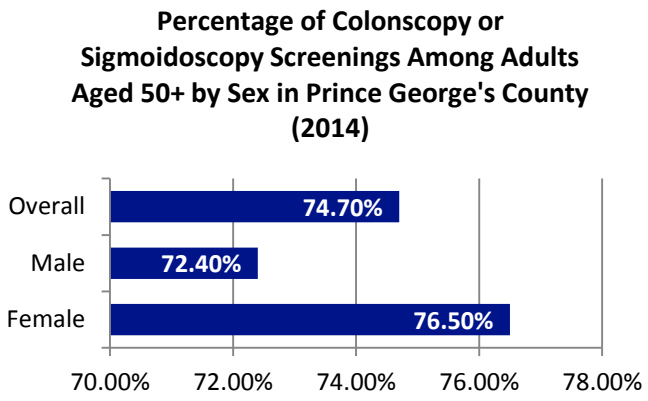


Figure 41. Percentage of Adults aged 50+ that have ever had a Sigmoidoscopy or Colonoscopy Exam by Sex in Prince George's County, 2014.
(Source: PGC Health Zone, 2014)

When examining the screening percentages within each county based on Race/Ethnicity, Montgomery County shows higher percentages of screenings in whites than in any other Race/Ethnicity, followed by other, Hispanic, Black, and then Asian. In Prince George's County, the 'Other' category boasted the highest percentage, followed by Hispanic and Black at roughly the same percentage, then white and then Asian (Figure 42 and Figure 43).

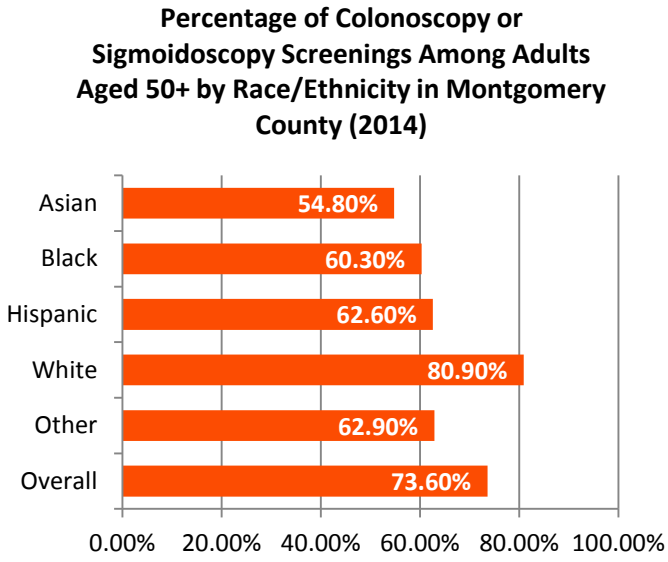


Figure 42. Percentage of Adults aged 50+ that have ever had a Sigmoidoscopy or Colonoscopy Exam by Race/Ethnicity in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

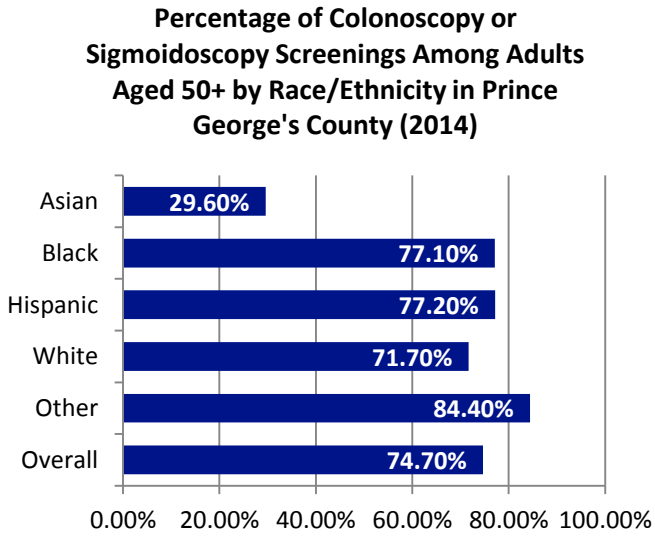


Figure 43. Percentage of Adults aged 50+ that have ever had a Sigmoidoscopy or Colonoscopy Exam by Race/Ethnicity in Prince George's County, 2014.
(Source: PGC Health Zone, 2014)

Since 2012, there has been a sharp decrease in the percentage of adults aged 50 and over that have ever had a Blood Stool Test within the past two years in Montgomery County (Figure 44).

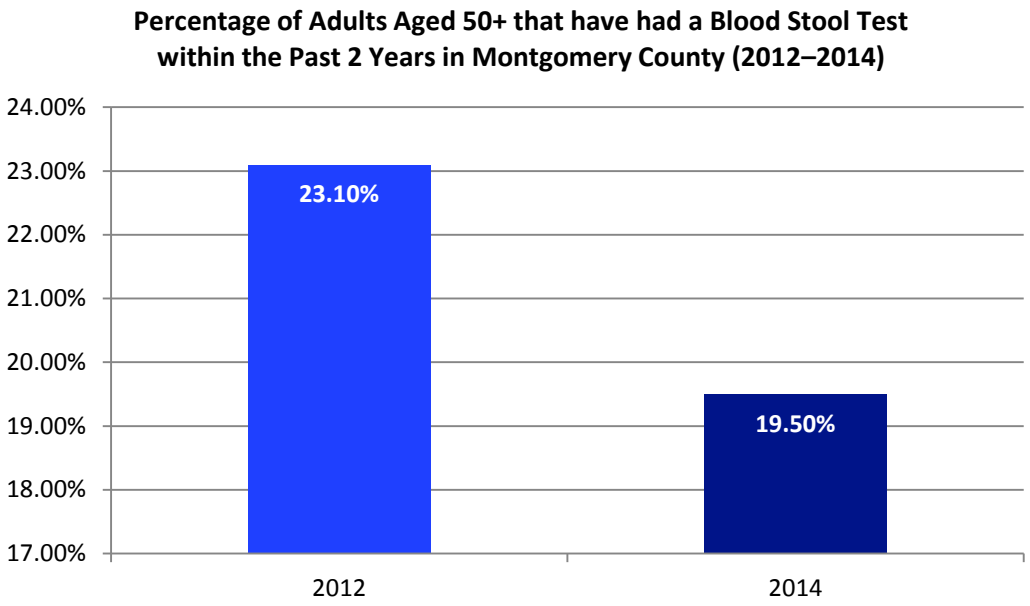


Figure 44. Percentage of Adults aged 50+ that have ever had a Blood Stool Test within the Past 2 Years in Montgomery County, 2012–2014.
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

Among the adults aged 50 and over who have had a Blood Stool Test in the past two years, those aged 65+ comprised a larger percentage than did their 50–64 year old counterparts in Montgomery County. Additionally, the percentages of males versus females who have had a blood stool test, within that 50 and over age group, do not differ much from one another (+/- 0.9) (Figure 45 and Figure 46).

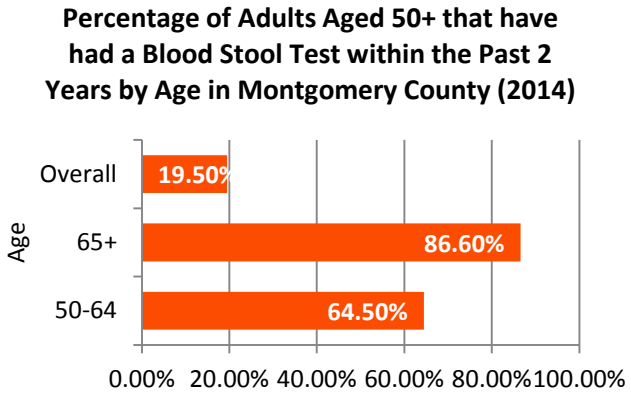


Figure 45. Percentage of Adults aged 50+ that have ever had a Blood Stool Test within the Past 2 Years by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

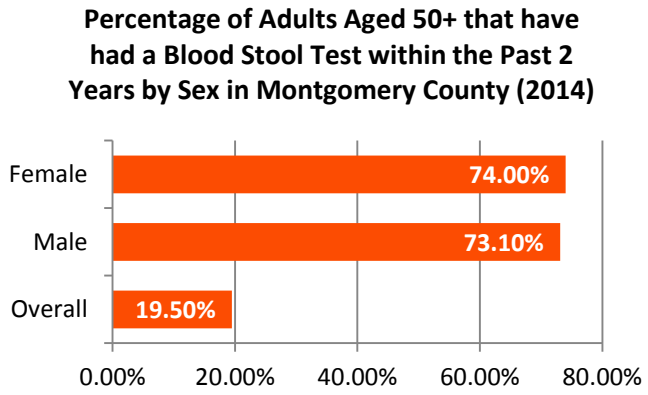


Figure 46. Percentage of Adults aged 50+ that have ever had a Blood Stool Test within the Past 2 Years by Sex in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

Among adults aged 50 and over, when looking at percentages of blood stool testing based on Racial/Ethnic category in Montgomery County, whites make up the largest percentage, followed by other and Hispanic, then Black and then Asian (Figure 47).

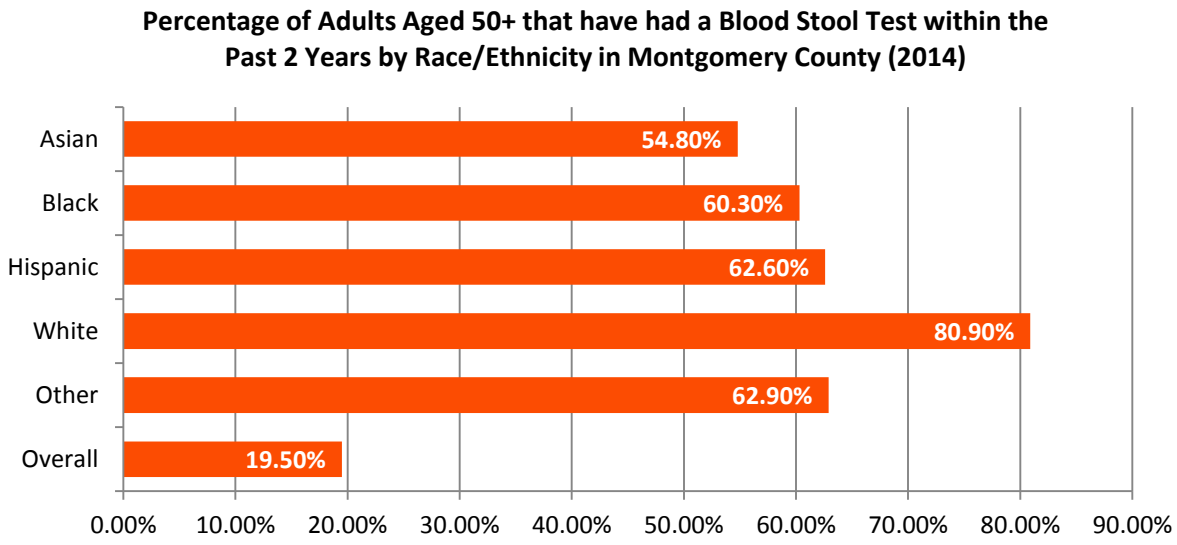


Figure 47. Percentage of Adults aged 50 and over that have ever had a Blood Stool Test within the Past 2 Years by Race/Ethnicity in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

1.4 Prostate Cancer

Incidence

The incidence of prostate cancer in the state of Maryland has been steadily decreasing since 2006. The same trend is true for Montgomery County and Prince George's County specifically. Montgomery County demonstrates the lowest incidence rates for prostate cancer in comparison with Prince George's County or the state over all (Figure 48).

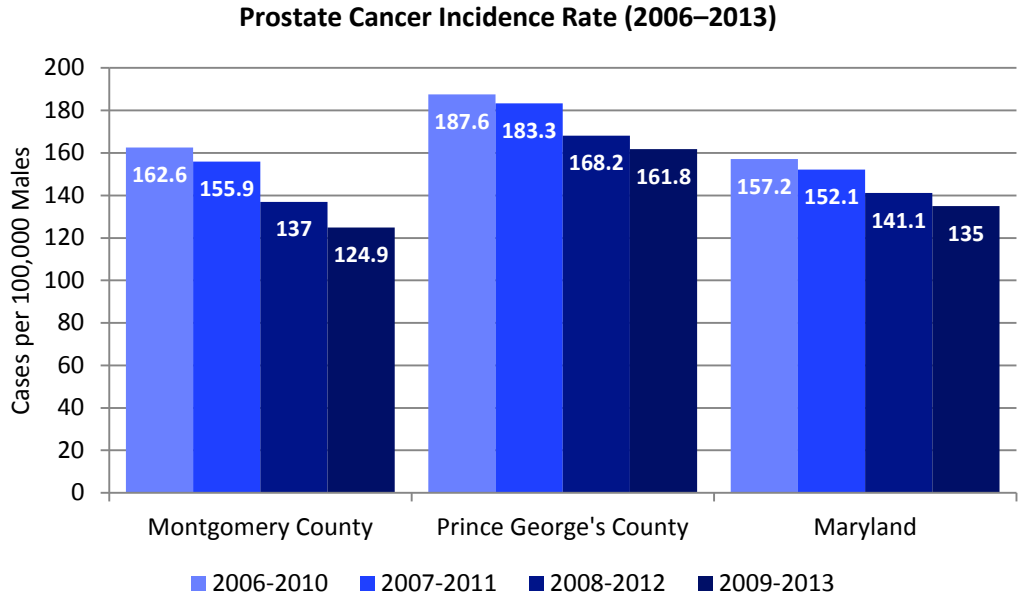


Figure 48. Age-Adjusted Incidence Rate for Prostate Cancer in Cases per 100,000 Males in Montgomery County and Maryland, 2009–2013.

(Sources: Healthy Montgomery & PGC Health Zone, 2013)

For both Montgomery and Prince George's County, Blacks have the highest incidence rates for Prostate Cancer, and in both cases those rates are much higher than the overall incidence rates for the county. This is then followed by white and then Hispanic (Figure 49 and Figure 50).

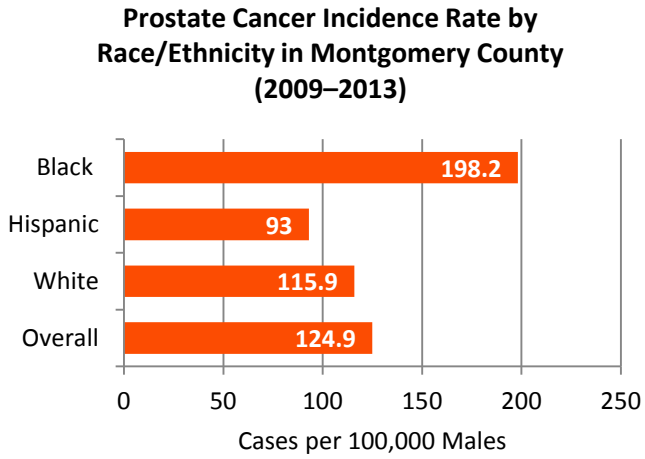


Figure 49. Age-Adjusted Incidence Rate for Prostate Cancer in Cases per 100,000 Males by Race/Ethnicity in Montgomery County, 2009–2013.

(Sources: Healthy Montgomery. 2013)

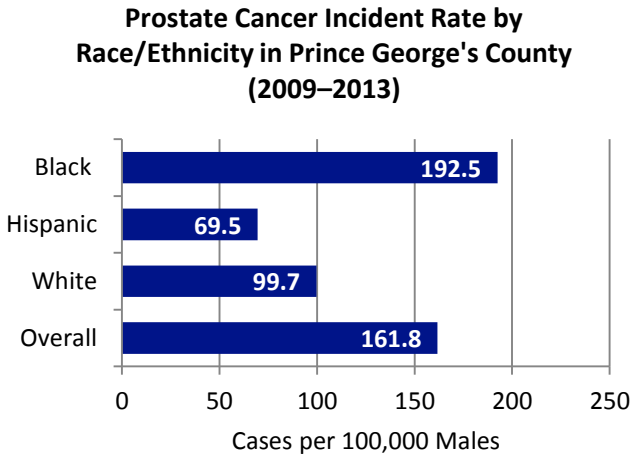


Figure 50. Age-Adjusted Incidence Rate for Prostate Cancer in Cases per 100,000 Males by Race/Ethnicity in Prince George's County, 2009–2013.

(Source: PGC Health Zone, 2013)

Mortality

Death rates due to prostate cancer have decreased in Maryland overall and in Montgomery County and Prince George's County respectively. Montgomery County rates have been consistent until a decrease in 2009. Montgomery County has also consistently met the HP 2020 target since 2006. Maryland has met the HP 2020 target in 2009–2013. Prince George's County, however, while rates have decreased, has not met the HP 2020 target (Figure 51).

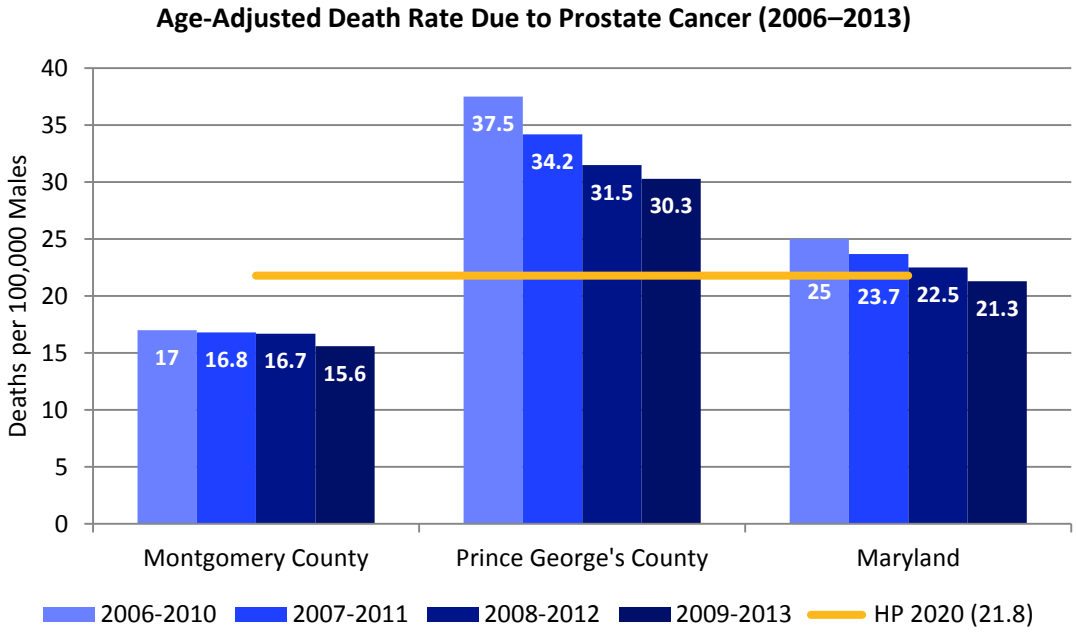


Figure 51. Age-Adjusted Death Rate due to Prostate Cancer per 100,000 Males in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

In both Montgomery and Prince George's County, Blacks have higher death rates associated with Prostate Cancer in comparison to whites. Blacks in both counties have rates that surpass the overall death rates for the county (Figure 52 and Figure 53).

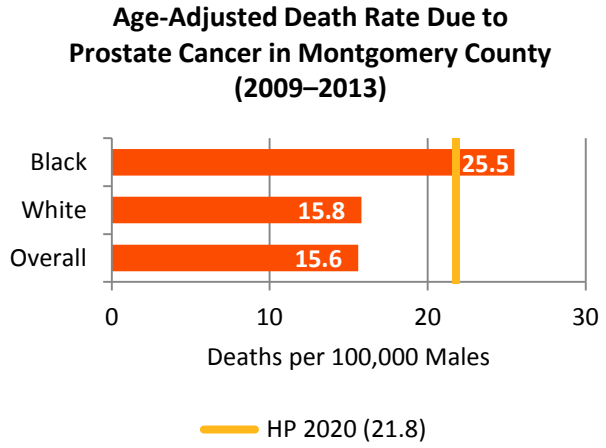


Figure 52. Age-Adjusted Death Rate due to Prostate Cancer per 100,000 Males by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

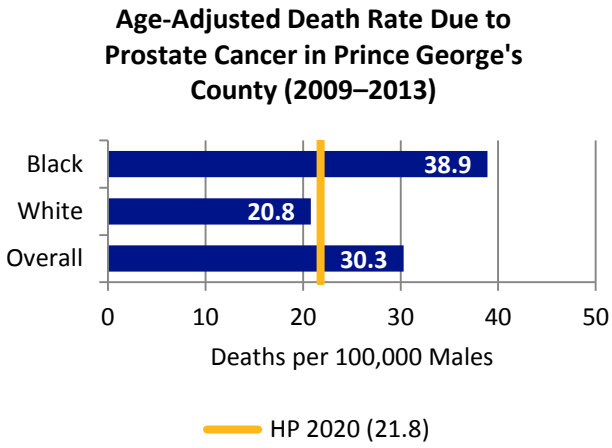


Figure 53. Age-Adjusted Death Rate due to Prostate Cancer per 100,000 Males by Race/Ethnicity in Prince George's County, 2009–2013.
(Source: PGC Health Zone, 2013)

1.5 Cervical Cancer

Incidence

The incidence rates for cervical cancer among females in Maryland overall have decreased and have met the HP 2020 target. In Montgomery County, the incidence rates are substantially lower than those in Prince George's County or the state overall. Montgomery County has achieved the HP 2020 target since 2006. In Prince George's County, the incidence rates have increased since 2006. The rates are higher than the HP 2020 target (Figure 54).

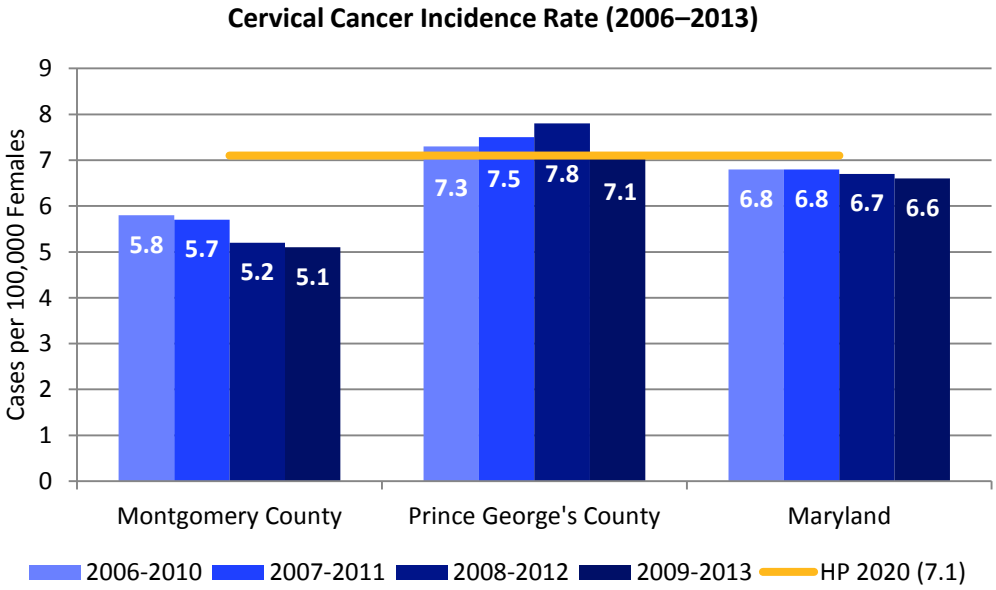


Figure 54. Age-Adjusted Incidence Rate for Cervical Cancer in Cases per 100,000 Females in Montgomery County, Prince George's County, and Maryland, 2006–2013.
(Sources: Healthy Montgomery & PGC Health Zone, 2013)

When looking at cervical cancer incidence rates based on racial/ethnical groups, in both Montgomery and Prince George's County Hispanics have the highest incidence rates, surpassing the HP 2020 target and the overall rate for the counties. In Montgomery County, the HP 2020 target was met overall, with Blacks and whites having rates lower than Hispanics. In Prince George's County, the HP 2020 target was not met by any category besides Black. Hispanics had the highest rate followed by whites (Figure 55 and Figure 56).

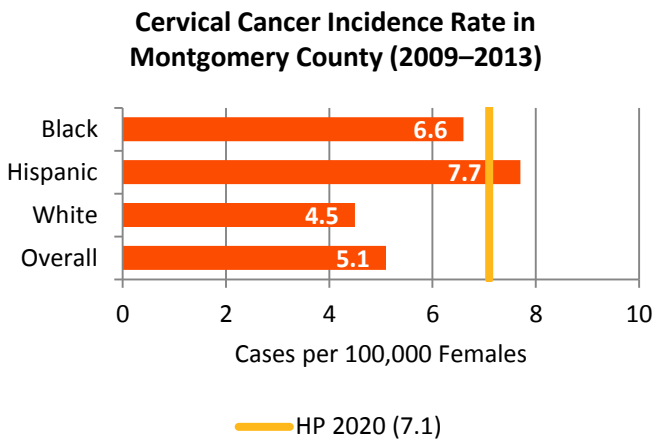


Figure 55. Age-Adjusted Incidence Rate for Cervical Cancer in Cases per 100,000 Females by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

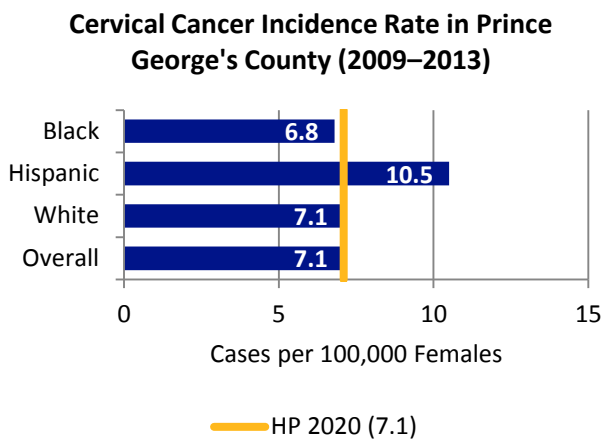


Figure 56. Age-Adjusted Incidence Rate for Cervical Cancer in Cases per 100,000 Females by Race/Ethnicity in Prince George's County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

Screening

Among adult females, the total percentage that has had a Pap Smear in the past 3 years has decreased. The HP 2020 target of 93.0 percent has not been attained. While the overall Maryland, Montgomery County, and Prince George's County percentages and roughly the same, Montgomery County had a slightly greater percentage (Figure 57).

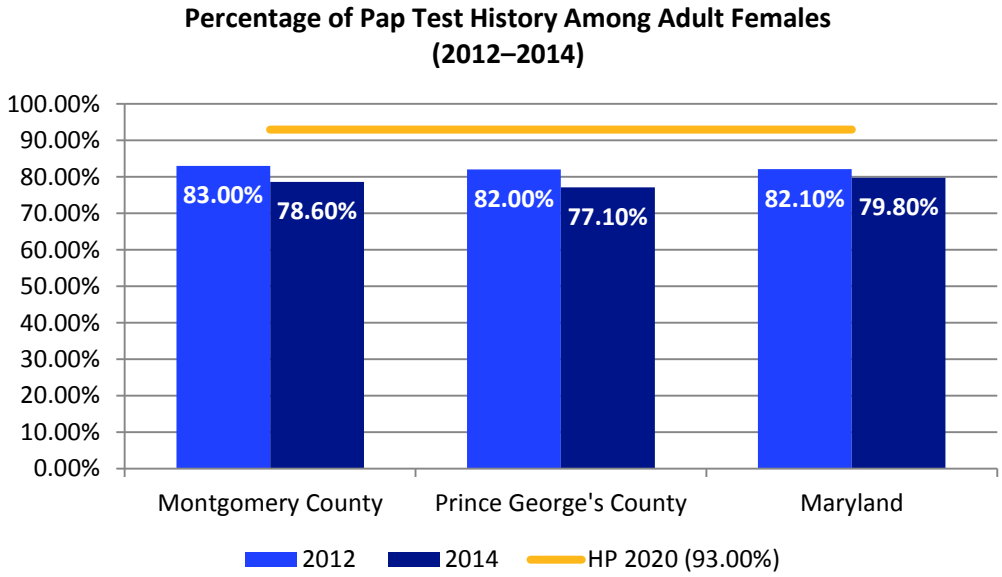


Figure 57. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years in Montgomery County, Prince George's County, and Maryland, 2012–2014.
(Sources: Healthy Montgomery & PGC Health Zone & MD BRFSS 2014)

For both Montgomery and Prince George's County, the age group that reports the highest percentage of pap testing, is 45–64 year olds, followed by 18–44 years olds, and then 65+ (Figure 58 and Figure 59).

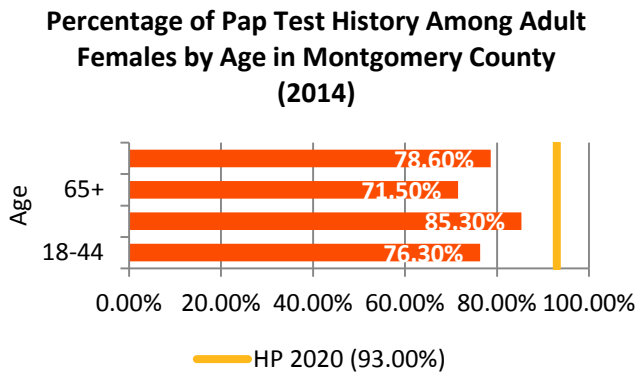


Figure 58. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

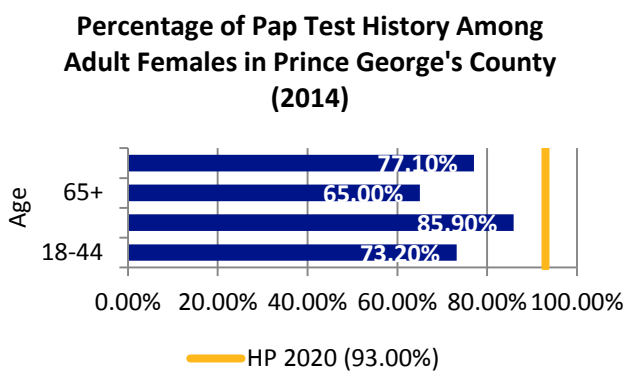


Figure 59. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years by Age in Prince George's County, 2014.
(Source: PGC Health Zone, 2014)

When looking at females aged 18 and over that had a pap smear in the past 3 years, through the categories of Race/Ethnicity, for both Montgomery and Prince George's County had no groups meet the HP 2020 target. In Montgomery County, the group contributing the highest percentage of females tested was white, followed closely by Hispanic, Black, Asian and then other. In Prince George's County, the highest percentage was found in the Black group, followed closely by Hispanic, then other, white, and then Asian (figure 60 and Figure 60).

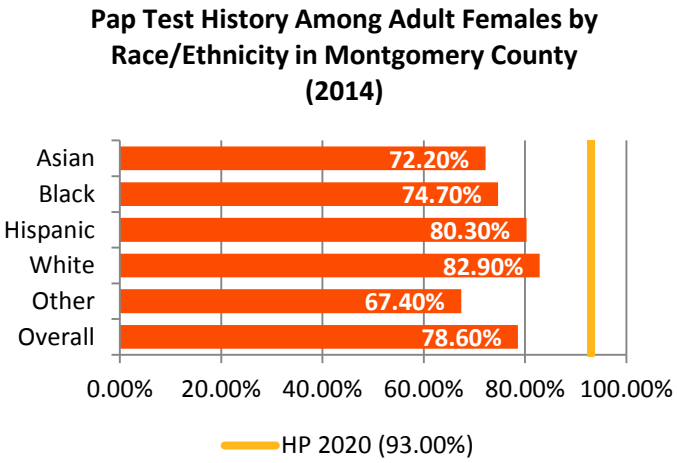


Figure 60. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years by Race/Ethnicity in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

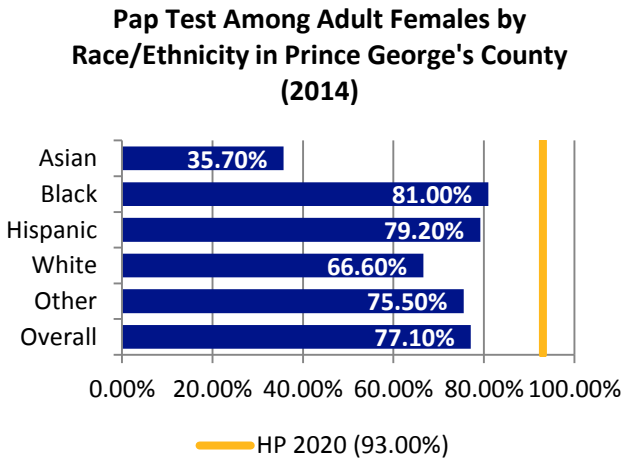


Figure 61. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years by Race/Ethnicity in Prince George's County, 2014.
(Source: PGC Health Zone, 2014)

1.6 Skin Cancer

Incidence

According to the National Cancer Institute, incidence rates for skin cancer have remained stable in Montgomery County, Prince George's County and Maryland[2]. The statewide age-adjusted incidence rate from 2009-2013 was 21 cases per 100,000. Prince George's County (6.6 per 100,000) has a lower incidence rate than Montgomery County (18.4 per 100,000) and the state.

When the incidence rates are stratified by demographic characteristics, racial, gender and age disparities become evident. In Montgomery County, skin cancer incidence rates are higher among men (25.2 per 100,000) than women (13.6 per 100,000). Skin cancer incidence is also greater in those aged 65 + (73.6 per 100,000) than those who are under 65 (10.5 per 100,000). In Prince George's County, the trend remains the same with males (10.0 per 100,000) having higher incidence rates than females (4.4 per 100,000), and seniors aged 65 years or more (35.5 per 100,000) higher than adults under 65 years old (2.5 per 100,000). Based on Race/Ethnicity, we find some distinct differences between counties. In Montgomery County, whites (24.6 per 100,000) have an incidence rate that is close to 6 times greater than that of Hispanics (4.0 per 100,000). In Prince George's County, whites (19 per 100,000) have an incidence rate that is almost 20 times that of Blacks (0.9 per 100,000).

Mortality

The death rates associated with skin cancer have remained stable when looking at Maryland as a whole, Montgomery County specifically and Prince George's County specifically[3]. The HP 2020 targets (2.4 per 100,000) have not been met for the state overall (2.6 per 100,000), but it has been met in Montgomery County (2.2 per 100,000) and Prince George's County (1.9 per 100,000).

In both Montgomery and Prince George's County, women had lower death rates than men did for skin cancer. The mortality rate for Montgomery County males was 3.6 per 100,000, whereas the female mortality rate was 1.4 per 100,000. Prince George's County males had a mortality rate of 2.9 per 100,000 compared to the females' 1.1 per 100,000. The HP 2020 targets were met for women within each county.

For both Montgomery and Prince George's County, those individuals age 65+ had a higher death rate associated with skin cancer than their 64 and younger counterparts. The HP 2020 targets were not met in the 65+ category for either county, but were met for the 64 and younger category.

[2] U.S. Department of Health and Human Services (DHHS), National Institutes of Health (NIH), National Cancer Institute (NCI), & CDC. (2016). Incident rates table: Incident rate report for Maryland by county, melanoma of the skin, 2009-2013. *State Cancer Profiles*. Retrieved from: https://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=24&cancer=053&race=00&sex=0&age=001&type=incd#results

[3] DHHS, NIH, NCI, & CDC. (2016). Death rates table: Death rate report for Maryland by county, melanoma of the skin, 2009-2013. *State Cancer Profiles*. Retrieved from: https://statecancerprofiles.cancer.gov/cgi-bin/deathrates/deathrates.pl?24&053&00&0&001&1&1&1#results

1.7 Oral Cancer

Incidence

Oral cancer incidence has remained stable in Maryland overall, and in Montgomery County[4]. The overall incidence rate from 2009 to 2013 was 8.3 per 100,000 in Montgomery County, 7.5 per 100,000 in Prince George's County, and 10.7 per 100,000 in Maryland. In Montgomery County, men are more likely to have oral cancer (12 per 100,000) than females (5.3 per 100,000). Prince George's County has a similar pattern, with higher incidence rates among males (12.2 per 100,000) compared to females (4.0 per 100,000). However, the incidence rate in Prince George's County has been stable for both genders, whereas it is rising among women in Montgomery County. In terms of age, the incidence of oral cancer is much higher in those aged 65+ (Montgomery County: 31.3 per 100,000; Prince George's County: 30.2 per 100,000) compared to those aged 64 and younger (Montgomery County: 4.9 per 100,000; Prince George's County: 4.3 per 100,000).

Oral cancer incidence in terms of race/ethnicity indicates that in Montgomery County, whites (8.4 per 100,000) have the highest incidence of oral cancer, followed by Asian (7.8 per 100,000), then Black (6.4 per 100,000) and Hispanic (5.1 per 100,000). In Prince George's County, whites (11.5 per 100,000) have an incidence rate almost twice as high as Blacks (5.9 per 100,000).

Mortality

In both counties and Maryland overall, the mortality rates of oral cancer have been decreasing[5]. With that being said, Prince George's County (2.6 per 100,000) and Maryland (2.4 per 100,000) have not met the HP 2020 target of 2.3 per 100,000. Montgomery County, with a mortality rate of 1.4 per 100,000, has met the target.

In both counties, men (Montgomery County: 2.1 per 100,000; Prince George's County: 4.4 per 100,000) have a higher mortality rate than women (Montgomery County: 0.8 per 100,000; Prince George's County: 1.2 per 100,000). The rate for both genders in Montgomery County met the HP 2020 target. In Prince George's County, the mortality rate among men met the HP 22020 target, but the women's did not. Mortality rates for oral cancer are higher in those aged 65+ (Montgomery County: 7.7 per 100,000; Prince George's County: 14.2 per 100,000) compared to those 64 years and younger (Montgomery County: 0.5 per 100,000; Prince George's County: 1.0 per 100,000). The HP 2020 target was met only in those aged 64 and younger in both counties.

[4] DHHS, NIH, NCI, & CDC. (2016). Incident rates table: Incidence rate report for Maryland by county, oral cavity & pharynx, 2009-2013. *State Cancer Profiles*. Retrieved from: https://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=24&cancer=003&race=00&sex=0&age=001&type=incd#results

[5] DHHS, NIH, NCI, & CDC. (2016). Death rates table: Death rate report for Maryland by County, oral cavity & pharynx, 2009-2013. *State Cancer Profiles*. Retrieved from: https://statecancerprofiles.cancer.gov/cgi-bin/deathrates/deathrates.pl?24&003&00&0&001&1&1&1#results

1.8 Thyroid Cancer

Incidence

The incidence rates of thyroid cancer have remained stable in Maryland overall, as well as in Montgomery County and Prince George's Counties[6]. However, the incidence rate in Montgomery County (19.3 per 100,000) is higher than in the state (15 per 100,000), while the rate in Prince George's County (12.1 per 100,000) is lower than both. In both counties, females (Montgomery County: 27.9 per 100,000; Prince George's County: 17.9 per 100,000) have a greater incidence rate of thyroid cancer than do males (Montgomery County: 9.8 per 100,000; Prince George's County: 5.5 per 100,000). By age, incidence rates of thyroid cancer for those aged 64 and younger and those aged 65+ have remained stable. Those aged 65+ (Montgomery County: 28.2 per 100,000; Prince George's County: 22.6 per 100,000) have a higher incidence of thyroid cancer than their younger counterparts (Montgomery County: 18 per 100,000; Prince George's County: 10.6 per 100,000). In Montgomery County, whites (20.6 per 100,000) have highest thyroid cancer incidence rates followed by Asians (17.6 per 100,000), Hispanic (16.2 per 100,000), and then Black (12.3 per 100,000). Similarly, in Prince George's County, whites (12.2 per 100,000) have the highest rates followed by Asians (11.6 per 100,000), Blacks (11.6 per 100,000) and Hispanics (9.6 per 100,000).

Mortality

The mortality rates[7] for thyroid cancer in Maryland overall is consistent with the rate in Montgomery County at 0.4 per 100,000. The number of Prince George's County deaths due to thyroid cancer is too low to determine mortality rate.

[6] DHHS, NIH, NCI, & CDC. (2016). Incidence rates table: Incidence rate report for Maryland by county, Thyroid, 2009-2013. *State Cancer Profiles*. Retrieved from: https://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=24&cancer=080&race=00&sex=0&age=001&type=incd#results

[7] DHHS, NIH, NCI & CDC. (2016). Death rates table: Death rate report for Maryland by County, Thyroid, 2009-2013. *State Cancer Profiles*. Retrieved from: https://statecancerprofiles.cancer.gov/cgi-bin/deathrates/deathrates.pl?24&080&00&0&001&1&1&1#results

1.9 Tobacco/Smoking

Overall, tobacco and cigarette use have decreased over the years[8]. For example, the national percentage of adolescent smokers decreased from 13 percent in 2002 to 4.9 percent in 2014. As of 2014, 25.2 percent of the population reported tobacco use while 20.8 percent reported cigarette use.

A survey of Montgomery County adolescents in grades 9 to 12 found a significant decrease in the rate of adolescent tobacco users from 19.2 percent in 2010 to 12.1 percent in 2013 (Figure 62).[8] This decrease has helped the County meet the SHIP 2017 target of 15.2 percent adolescent tobacco smokers.

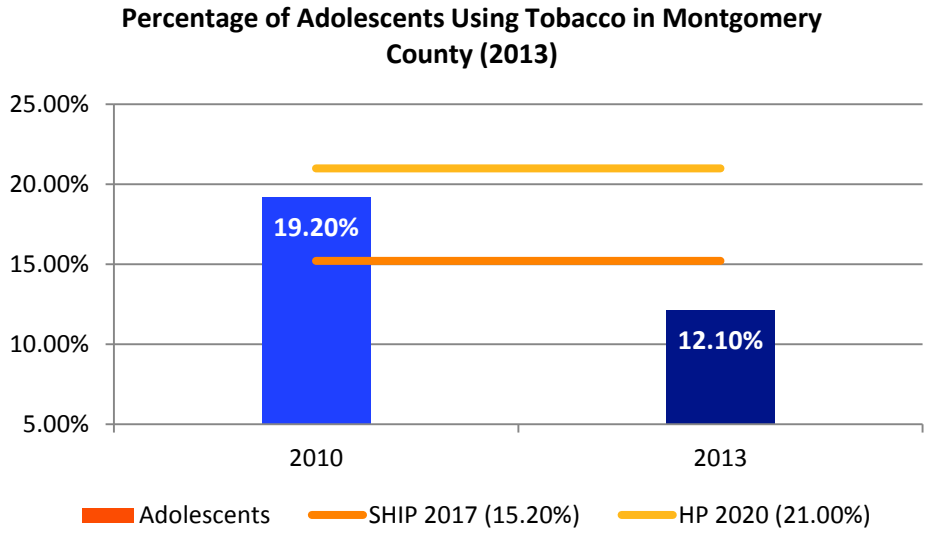


Figure 62. Adolescents Using Tobacco in Montgomery County, 2013
(Sources: Healthy Montgomery. 2013)

Adult smokers comprise 7.9 percent of Montgomery County residents and 11.8 percent of Prince George's County residents (Figure 63). Overall, both counties meet the SHIP target of 15.5 percent and Healthy People 2020 target of 12.0 percent adult smokers. Still, when stratified by race and ethnicity, Blacks in Montgomery County and whites in Prince George's County do not meet the HP 2020 target; however, both groups do meet the SHIP target.

[8] Healthy Montgomery (2013). *Adolescents who use tobacco.* Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=2251&localeId=1259

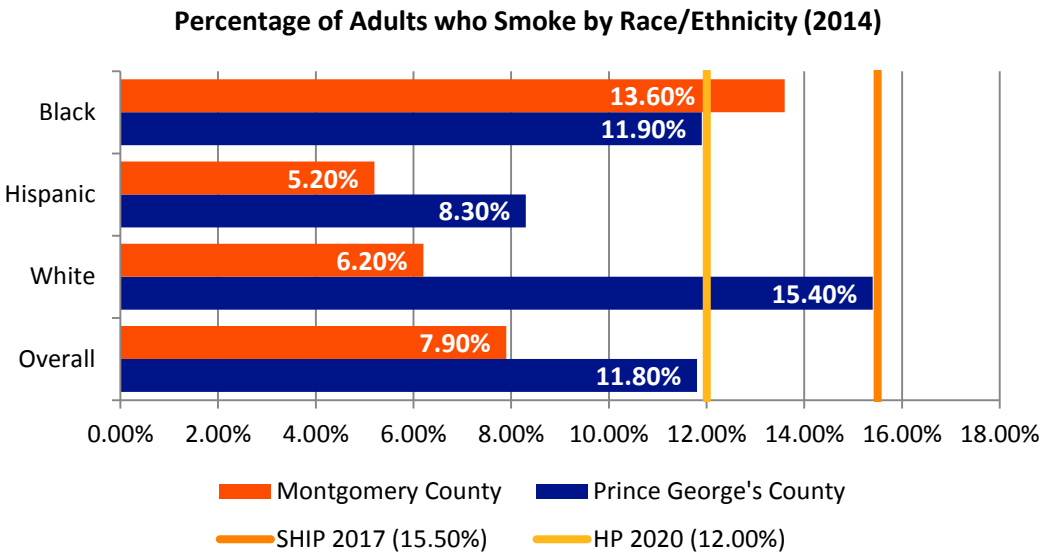


Figure 63. Adults who Smoke by Race and Ethnicity, 2014
(Sources: Healthy Montgomery. 2014)

Most of the adult smokers in both counties fall into the 45–64 years age group (Figure 64). Additionally, the 45–64 age group in Prince George's County is the only group that does not meet Healthy People 2020's target. The data also shows that males are more likely to smoke than females in both counties (Figure 65). More specifically, males in Prince George's County smoke at the highest rate, going over the Healthy People 2020 target.

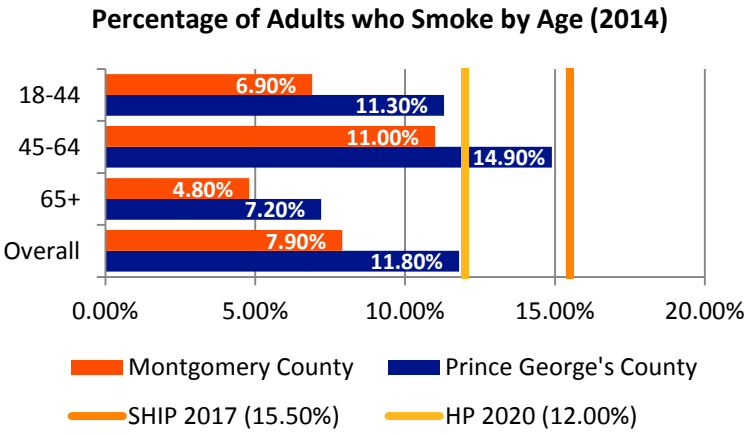


Figure 64. Adults who Smoke by Age, 2014
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

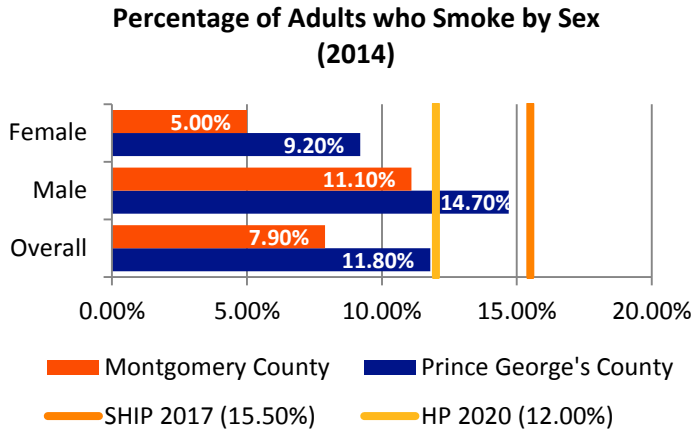


Figure 65. Adults who Smoke by Sex, 2014
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

A survey of Montgomery County residents over the age of 12 found that 5.4 percent of the population reported having smoked marijuana (Figure 66). The highest rate of marijuana use was among the 12–17 year old adolescents.

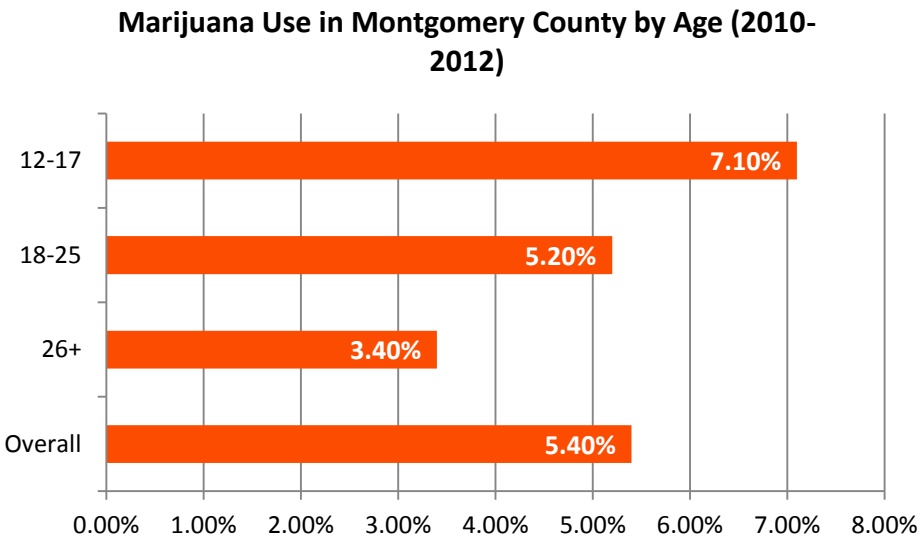


Figure 66: Marijuana Use in Montgomery County by Age (2010-2012)
(Sources: Healthy Montgomery. 2012)

Community Resources

Cancer resources and services in Washington Adventist Hospital's Community Benefit Service Area are provided in various settings ranging from local physician practices, hospitals, and clinics, to county services. Diagnosis and treatment is provided by all hospitals in Montgomery County, the safety net clinics, and many physicians specializing in oncology care. Some of the services are targeted to specific types of cancer as well as to individuals who are most at-risk and needing prevention, screening, and/or treatment. The following is a listing of various services and providers:

- Washington Adventist Hospital (WAH) has a comprehensive oncology program including:
  - A full team of Cancer Navigators at WAH is available to assist patients and families;
  - Support groups;
  - A Cancer Outreach Coordinator for WAH provides guidance to low-income patients and helps to coordinate cancer screening and outreach services in the community;
  - WAH works closely with the following clinics regarding cancer treatment and services: Mary's Center, Muslim Community Clinic, Mobile Medical Care, Inc., Greater Baden, and Montgomery County Women's Cancer Control Program.
- Project Health through Early Awareness and Learning (HEAL) lists many free or low-cost cancer screening resources for residents of Prince George's County such as the Maryland Colorectal Cancer Control Program.
- Montgomery County Department of Health and Human Services provides cancer screening and case management services to eligible low-income and uninsured county residents; also provides care coordination and patient navigation for clients to access cancer screenings. Targeted cancers are: colorectal, oral and prostate cancers.
- Montgomery County Women's Cancer Control Program provides yearly breast and cervical cancer screenings and follow-up for uninsured/underinsured female residents of Montgomery County age 40 and older.
- Prince George's County Health Department provides free breast and cervical cancer screenings, including mammography – available to women over 40 who meet the program's financial criteria. In addition, the Health Department educates the public and provides nurse case managers to assist with follow-up procedures and annual screenings. Lay Health Outreach Workers educate, motivate, and recruit women in the priority populations to enroll in the programs for screening services.
- The Prince George's Health Department also developed an initiative for uninsured/under-insured, low income women in the county called The Breast and Cervical Cancer Program (BCCP). The goal of this program is to increase the awareness of both breast and cervical cancer screenings, provide educational materials to community members, medical providers and health educators and to reduce and prevent morbidity and mortality as well as reduce health disparities among minorities when it comes to breast and cervical cancer.
- The Cancer Society provides support groups, education, and advocacy. Special programs such as "Look Good, Feel Better" are offered throughout the county.
- Support groups are offered in various settings, including faith communities, hospitals, and outpatient centers.

Section IV: Findings

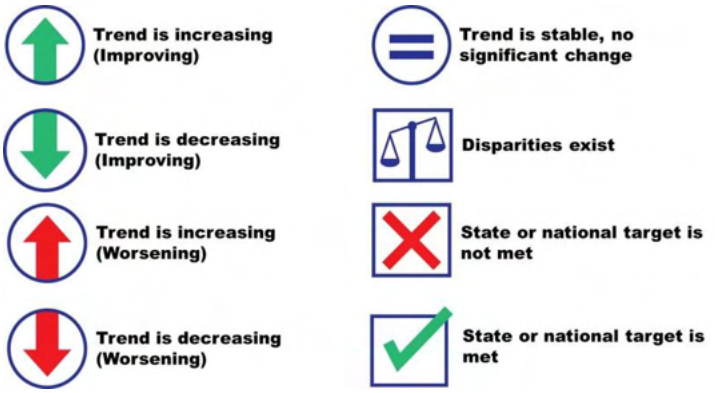
Part B:
Secondary Data Findings

Chapter 2: Cardiovascular Health

Cardiovascular Health

KEY FINDINGS

- There is a downward trend in mortality rates for heart disease in Montgomery County, Prince George's County and Maryland overall. Despite this, Prince George's County has a much higher mortality rate than Montgomery County.
- Montgomery County meets both the Healthy People 2020 and SHIP 2017 targets for the rate of deaths related to heart disease.
- Prince George's County does not meet either Healthy People 2020 or SHIP 2017 targets for heart disease mortality rates.
- Blacks, followed by whites, have the highest mortality rates due to heart disease in both Montgomery and Prince George's Counties. Hispanics and Asians have the lowest mortality rates in both counties.
- The American Indian/Alaskan Native and Black residents of Montgomery County have the highest rates of hospitalization due to heart disease. In Prince George's County, the Black and white residents have the highest hospitalization rates.
- Only Montgomery County meets the Healthy People 2020 target for rates of stroke-related deaths.
- Neither Montgomery nor Prince George's County meet the Healthy People 2020 target for high blood pressure (the leading cause of stroke and heart disease) cases or cholesterol prevalence.
- Blacks and whites, along with more males than females, have the highest rates of high blood pressure cases in Montgomery County.
- Blacks and those who identify as "other" race, along with more males than females, have the highest prevalence of high blood pressure in Prince George's County.
- In Montgomery County, cholesterol rates are highest among males, as well as whites and those who identify as "other" race.
- In Prince George's County, cholesterol rates are highest among males, as well as Hispanics and those who identify as "other" race.



2.1 Heart Disease

Impact

While Maryland deaths due to diseases of the heart have decreased by 20 percent from a decade ago, heart disease is still the leading cause of death in the state.[1] Approximately 25 percent of all deaths in Maryland can be attributed to heart disease, which includes blood vessel diseases, heart rhythm problems, congenital heart defects, chest pains, heart muscle issues, heart valve problems, and stroke.[2]

Mortality

The death rate due to heart disease in the state of Maryland has been on the decline across racial groups. Even so, Figure 1 below demonstrates that Blacks in Maryland are more disproportionately burdened by heart disease than whites or the overall population. Despite the constant decrease in mortality rates, Maryland has not met the SHIP target of 166.3 deaths per 100,000 or the Healthy People 2020 target of 152.7 deaths per 100,000.

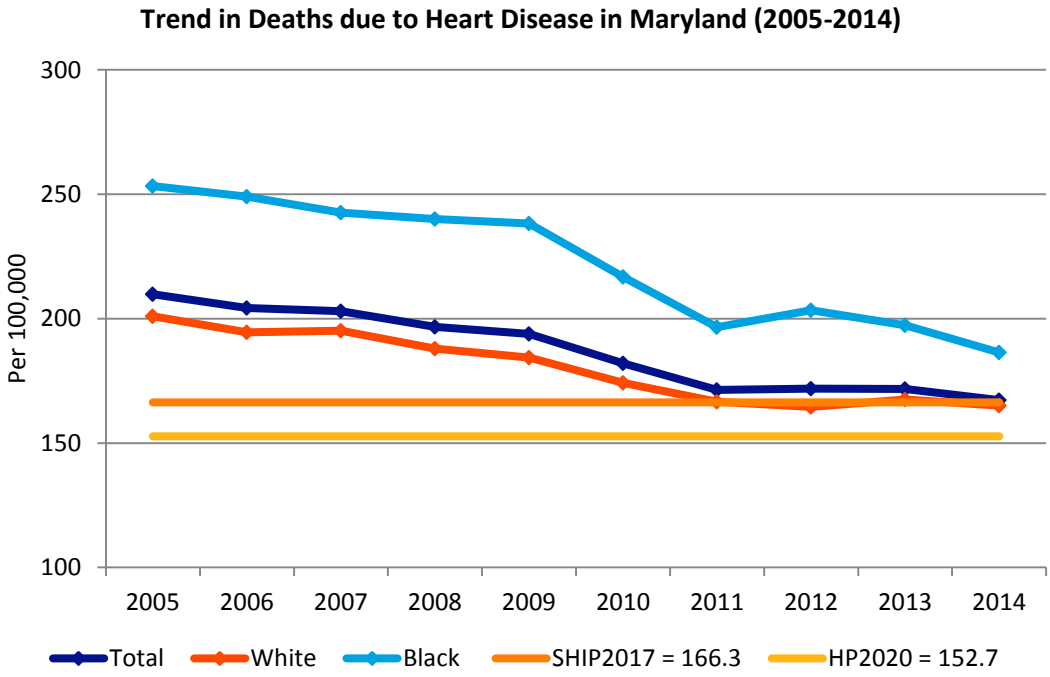


Figure 1. Trends in Death Rate due to Heart Disease, 2014
(Sources: Maryland Vital Statistics Report, 2014; Maryland State Health Improvement Process (SHIP), 2014)

Similar to the state, Montgomery County and Prince George's County have seen a decline in deaths due to heart disease over the past several years. The downward trend in mortality rates can be seen in Figure 2 below. According to Healthy Montgomery and PGC Health Zone, Montgomery County and Prince George's County have significantly decreased in the deaths due to heart disease from one measurement period to the next.

[1] Hogan, L., Mitchell, V., & Rutherford, B. (2014). Maryland Vital Statistics Annual Report, 2014. *Maryland Vital Statistics.* Retrieved from: http://dhmh.maryland.gov/vsa/Documents/14annual_revised.pdf
[2] Mayo Clinic. (2014). Diseases and conditions: Heart disease. Retrieved from: http://www.mayoclinic.org/diseases-conditions/heart-disease/basics/definition/con-20034056

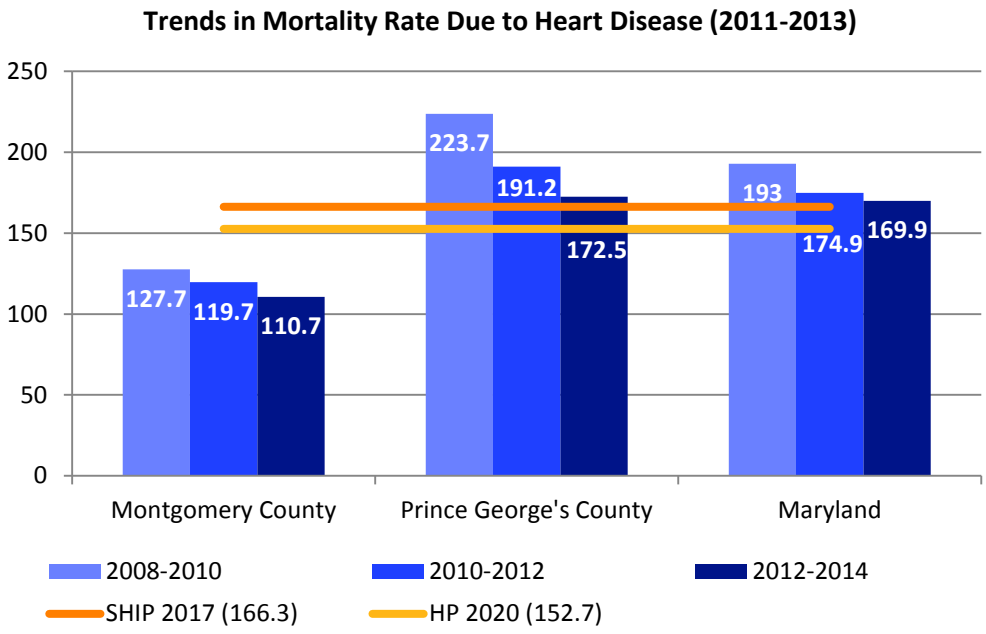


Figure 2. Death Rate due to Heart Disease per 100,000 Population
(Source: SHIP, 2011-2013)

Montgomery County has consistently had a lower mortality rate due to heart disease than both Prince George's County and Maryland overall. In 2014, with a mortality rate of 110.7 deaths per 100,000, Montgomery County met both the state target of 166.3 deaths per 100,000 and the national target of 172.7 deaths per 100,000 (Figure 3). Neither Prince George's County nor the state of Maryland met the targets. Furthermore, Prince George's County had a higher mortality rate than the state.

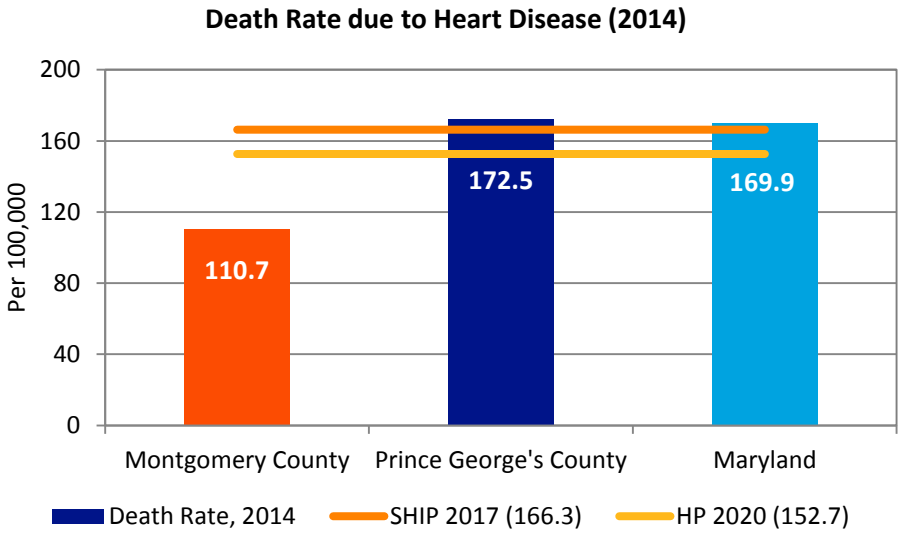


Figure 3. Death Rate due to Heart Disease, 2014
(Source: Maryland Vital Statistics Report, 2014)

Stratifying the mortality rate data by race and ethnicity reveals that some racial groups are more affected by heart disease than other racial groups. Blacks, followed by whites, have the highest mortality rates in Montgomery County, Prince George's County and Maryland. Hispanics, on the other hand, have the lowest mortality rate in both counties and the state. Prince George's County has higher mortality rates than Montgomery County for residents of all race and ethnicity.

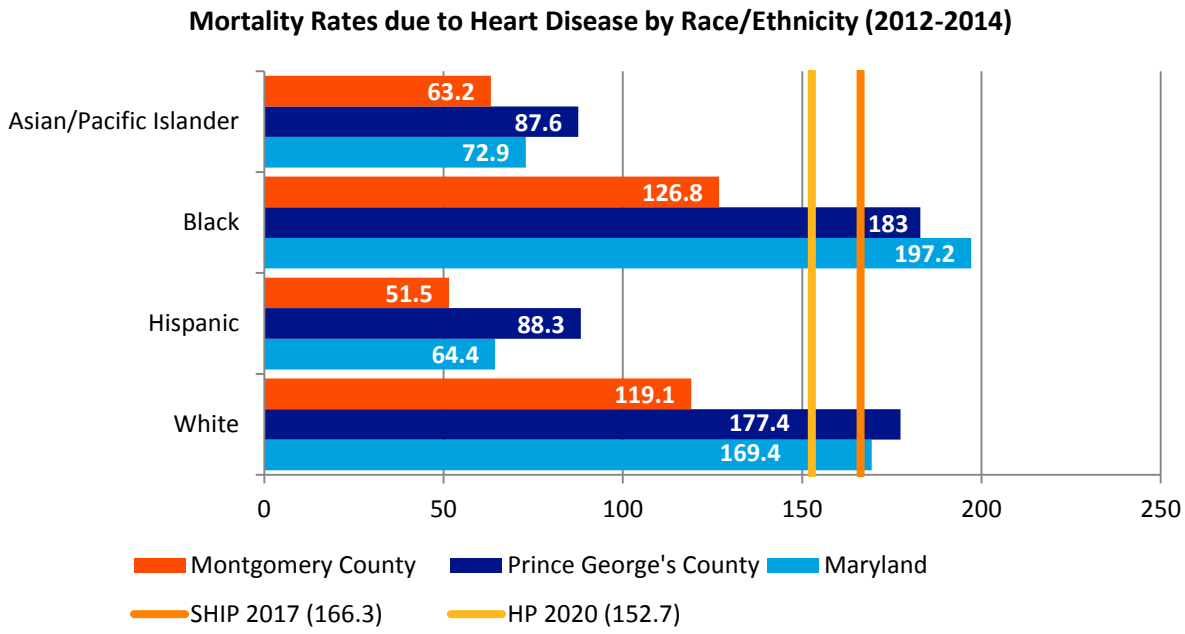


Figure 4. Heart Disease Related Deaths across Racial and Ethnic Groups
(Source: SHIP, 2012-2014)

An examination of the hospitalization rates due to heart failure for populations 18 and over shows that seniors over the age of 85 years are the most hospitalized population in both Montgomery and Prince George's Counties (Figures 5 and 6). Although the figures below show data from two different measurement periods, it can be seen that Prince George's County has an overall higher hospitalization rate due to heart failure than Montgomery County.

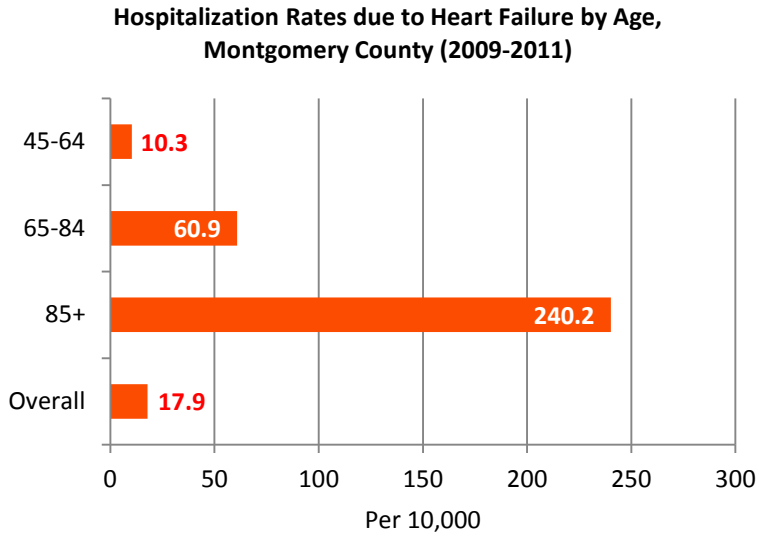


Figure 5. Hospitalization Rates due to Heart Failure by Age in Montgomery County
(Source: Healthy Montgomery, 2009-2011)

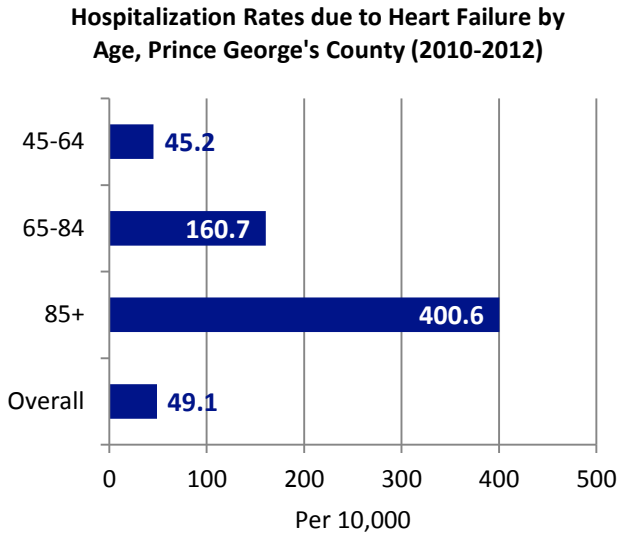


Figure 6. Hospitalization Rates due to Heart Failure by Age in Prince George's County
(Source: PGC Health Zone, 2010-2012)

Further investigation of the hospitalization rate by race and ethnicity reveals other racial disparities. In Montgomery County, American Indian/Alaskan Native is the most hospitalized population at 61.3 per 10,000 (Figure 7). Blacks are the second most hospitalized population in Montgomery County at 40.2 per 10,000. In Prince George's County, Black residents have the highest hospitalization rate at 61.9 per 10,000, followed by whites at 28.1 per 10,000 residents (Figure 8). In both Montgomery and Prince George's Counties, Asians are the have the lowest hospitalization rate due to heart failure.

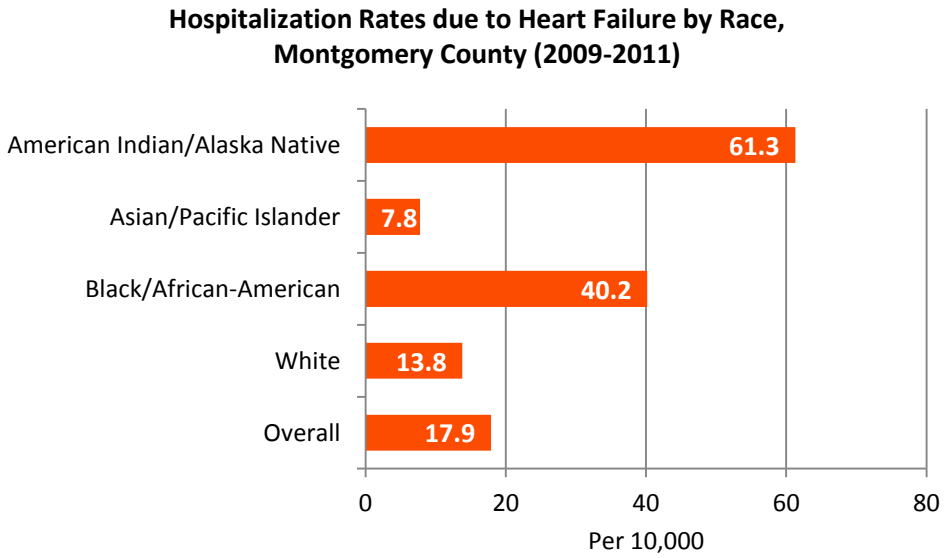


Figure 7. Hospitalization Rates due to Heart Failure by Race in Montgomery County (Source: Healthy Montgomery, 2009-2011)

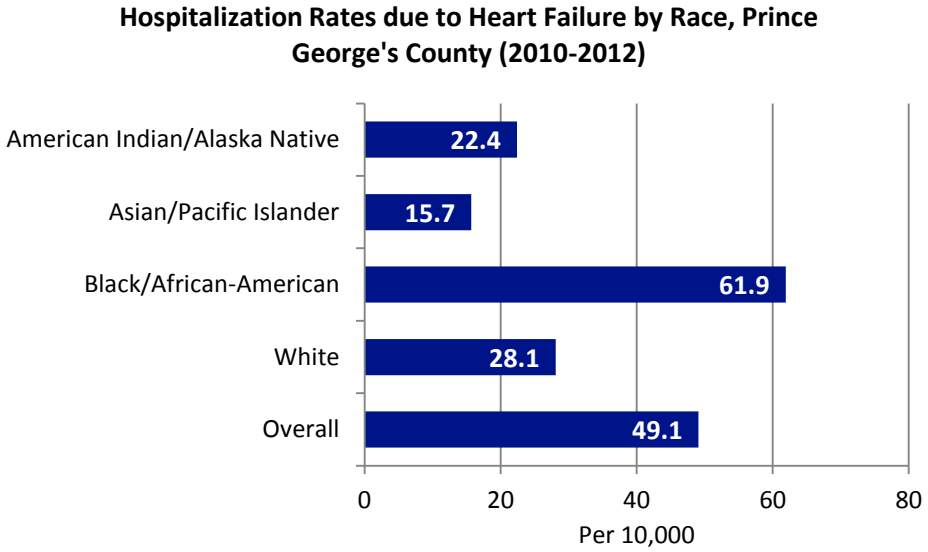


Figure 8. Hospitalization Rates due to Heart Failure by Race in Prince George's County (Source: PGC Health Zone, 2010-2012)

2.1 Stroke

Impact

Stroke is the fifth leading cause of death in the United States of America and is the leading cause of disability.[3] In Maryland, stroke is the third leading cause of death.[4] African-Americans die from stroke at a higher rate than whites and other races at both the national and state levels.[5] Stroke can be prevented by addressing risk factors such as high blood pressure and high cholesterol.

Mortality

In Maryland, the overall deaths due to stroke have been declining over the last decade (Figure 9). In fact, the death rate for whites in Maryland has been below the national target of 34.8 deaths per 100,000 since 2011. However, the mortality rate for Blacks in the state is significantly higher than the white and total mortality rates. There has been a spike in the stroke mortality rate among Blacks since 2012.

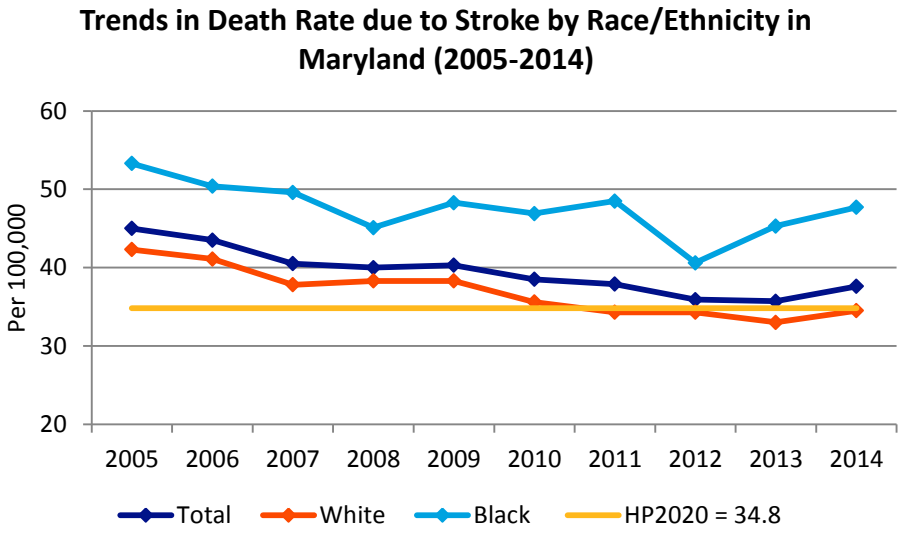


Figure 9. Trends in Death Rate due to Stroke by Race and Ethnicity in Maryland, 2005-2014
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

The stroke-related mortality rate in Montgomery County has been well below the Healthy People 2020 target of 34.8 deaths per 100,000 for several years in a row (Figure 10). In addition to meeting the national target, the death rate due to stroke has significantly improved over the years.[6] Prince George's County does not meet the national target and has been seeing minimal decrease in its stroke death rate.

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[3] American Stroke Association. (2016). *Heart Disease, Stroke and Research Statistics At-a-Glance, 2016.* Retrieved from: http://www.heart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_480086.pdf

[4] Healthy Communities Institute. (2016). Leading causes of death, 2010-2012. *Healthy Montgomery*. Retrieved from: https://data.montgomerycountymd.gov/en/Health-and-Human-Services/Leading-causes-of-death-Total-Population-2010-2012/43d7-et7a

[5] American Stroke Association. (2016). *Heart Disease, Stroke and Research Statistics At-a-Glance, 2016.* Retrieved from: http://www.heart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_480086.pdf

[6] Healthy Communities Institute. (2016). Age-adjusted mortality due to stroke. *Healthy Montgomery*. Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=4973&localeId=1259

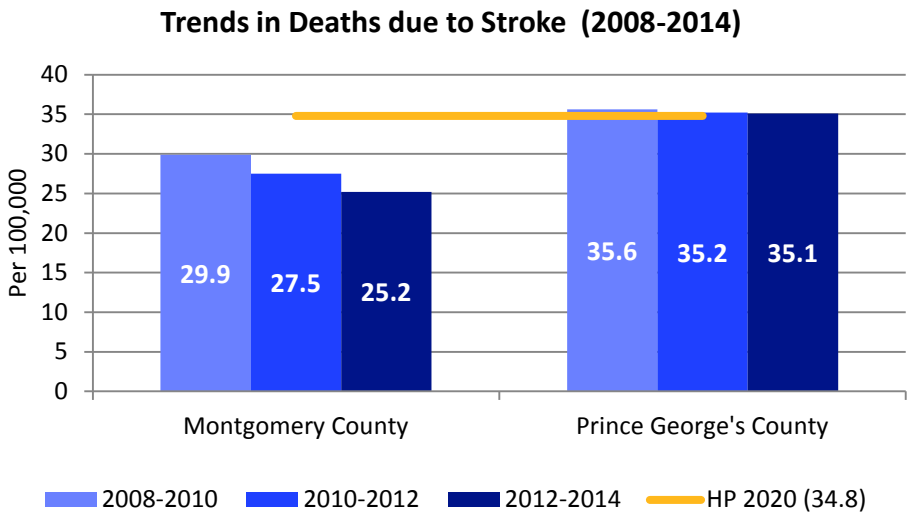


Figure 10. Trends in Deaths due to Stroke in Montgomery County and Prince George's County (Sources: Healthy Montgomery and PGC Health Zone, 2014)

High Blood Pressure

Hypertension, also known as high blood pressure, is a leading cause of stroke and heart attacks.[7] Healthy People set a target of 26.9 percent as the decreased percentage of high blood pressure cases by the year 2020. Montgomery County has yet to meet this goal. Even more so, when stratified by race and ethnicity, there are differences in the prevalence of high blood pressure among the various racial groups (see Figure 11). Blacks and whites are disproportionately burdened with high blood pressure in Montgomery County, whereas Blacks and those who identify as Other races are more burdened in Prince George's County.

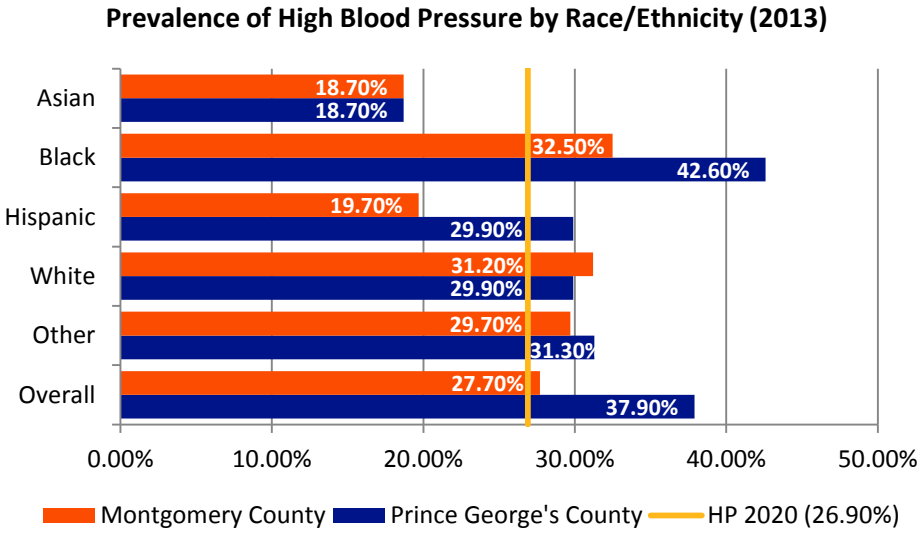


Figure 11. Prevalence of High Blood Pressure by Race and Ethnicity in Montgomery County and Prince George's County (Sources: Healthy Montgomery and PGC Health Zone, 2013)

In terms of gender, males are disproportionately affected by high blood pressure than females in both counties (Figure 12). When broken down into age groups, seniors 65 and over have the highest prevalence of hypertension in both

[7] Healthy Communities Institute. (2016). Leading causes of death, 2010-2012. *Healthy Montgomery*. Retrieved from: https://data.montgomerycountymd.gov/en/Health-and-Human-Services/Leading-causes-of-death-Total-Population-2010-2012/43d7-et7a

counties, followed by the 45-64 age group (Figure 13). While the patterns are similar for both counties, the residents of Prince George's County have a higher prevalence of hypertension than Montgomery County at every level.

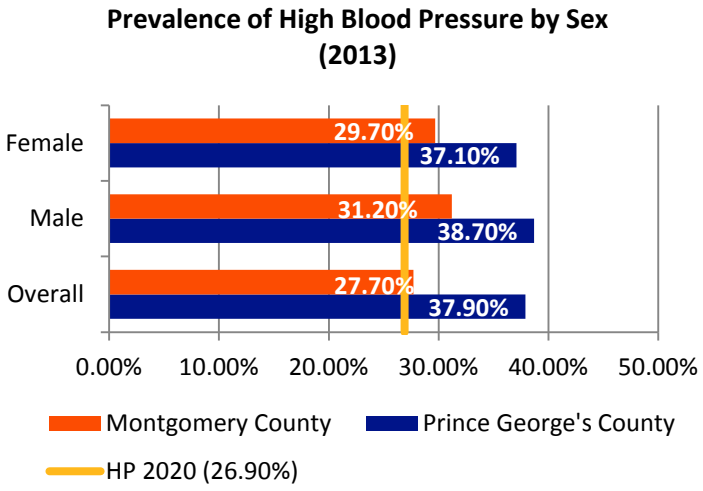


Figure 12. Prevalence of High Blood Pressure by Sex in Montgomery County and Prince George's County (Sources: Healthy Montgomery and PGC Health Zone, 2013)

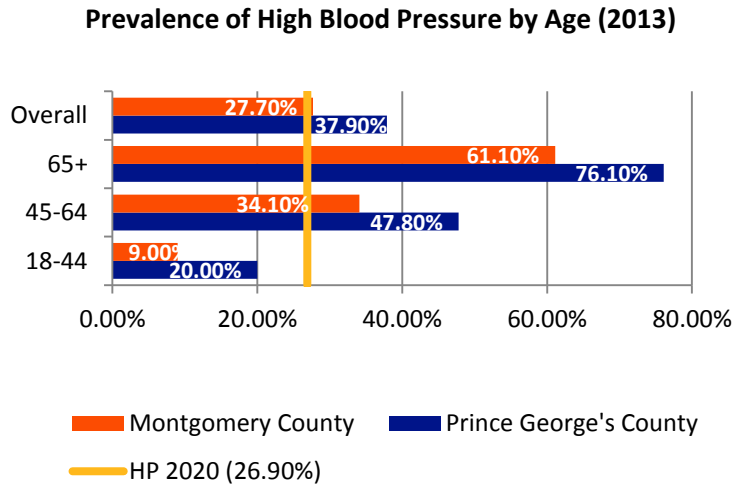


Figure 13. Prevalence of High Blood Pressure by Age in Montgomery County and Prince George's County. (Sources: Healthy Montgomery and PGC Health Zone, 2013)

The Maryland State Health Improvement Program (SHIP) has set a target of 234.9 emergency room visits per 100,000 for high blood pressure related illnesses. Montgomery County has met that target and has a consistently lower ER utilization rate for hypertension (Figure 14). Prince George's County, on the other hand, has a much higher ER utilization rate than Montgomery County and the SHIP target for high blood pressure related issues. However, Prince George's County has seen a significant decrease in that number from 2012 to 2014.

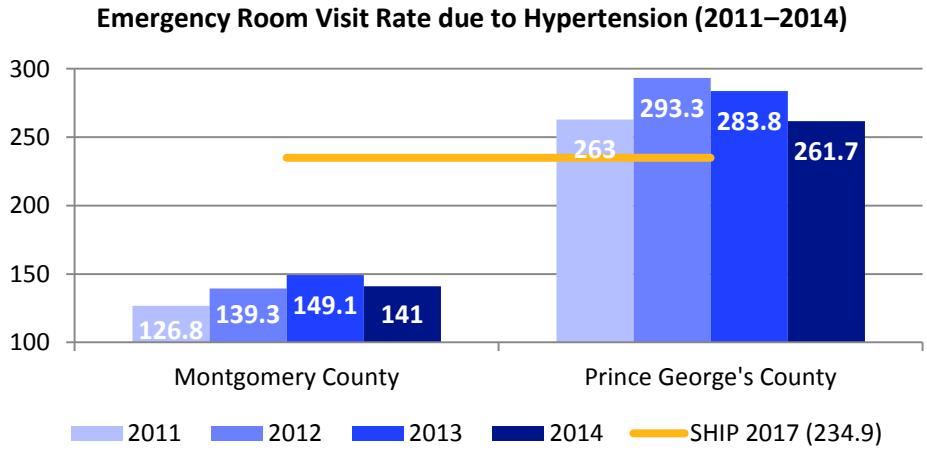


Figure 14. Trend in Emergency Room Visit Rate due to Hypertension in Montgomery County and Prince George's County (Sources: Healthy Montgomery and PGC Health Zone, 2014)

High Cholesterol

Having high cholesterol puts one a greater risk of developing heart disease or having a heart attack. Healthy People 2020 set a target of 13.5 percent for prevalence of high cholesterol. Neither Montgomery County nor Prince George's County have met the target (Figure 15). Although the figure below shows an increase in the prevalence of high cholesterol for both counties, it has not been a significant increase.

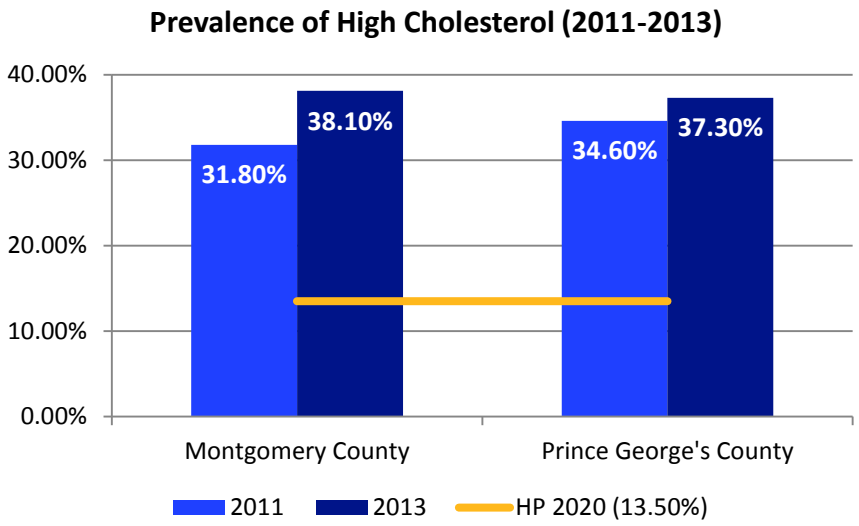


Figure 15. Prevalence of High Cholesterol in Montgomery and Prince George's Counties
(Sources: Healthy Montgomery and PGC Health Zone, 2013)

Although the high cholesterol rate is similar for both counties, breaking the data down by race and ethnicity, age and gender shows clear disparities among the different groups. The prevalence of high cholesterol is highest among those who identify as other and white in Montgomery County, whereas it is highest among Hispanics and others in Prince George's County (Figure 16). In both counties, males are more affected by high cholesterol than females (Figure 17). In terms of age, seniors over the age of 65, followed by residents between the age of 45 and 64, have the highest prevalence of high cholesterol in both counties (Figure 18).

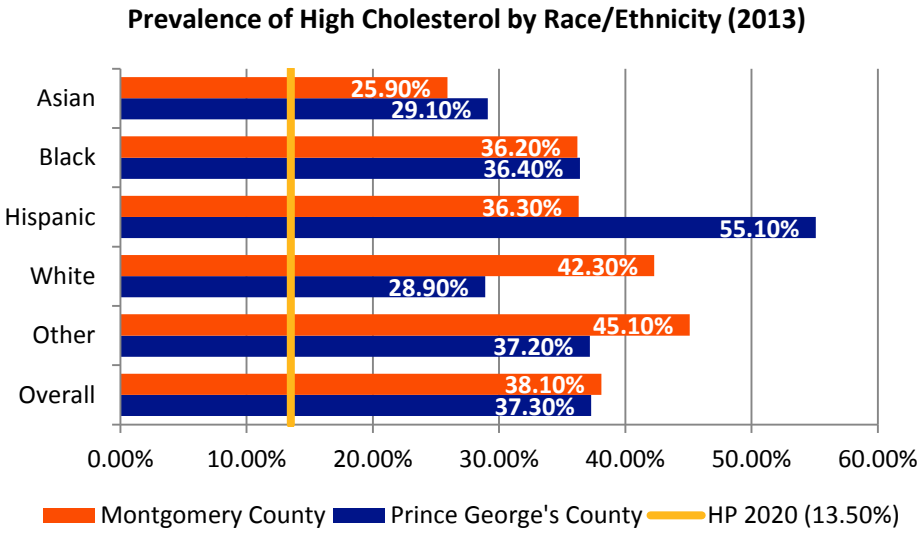


Figure 16. Prevalence of High Cholesterol in Montgomery and Prince George's Counties by Race and Ethnicity
(Sources: Healthy Montgomery and PGC Health Zone, 2013)

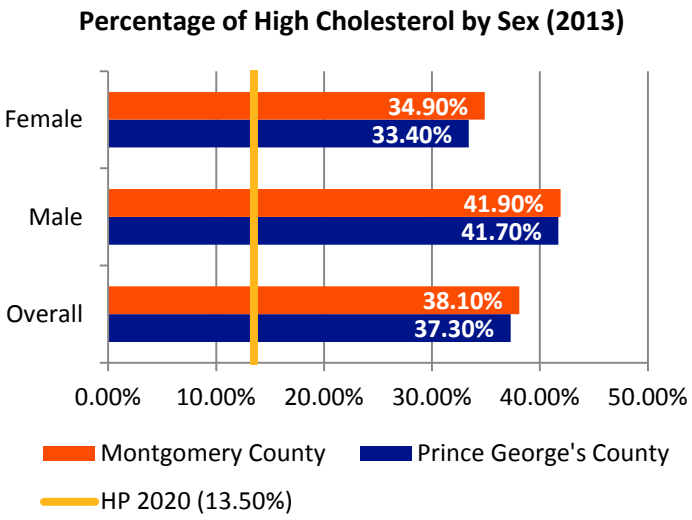


Figure 17. Prevalence of High Cholesterol by Gender in Montgomery and Prince George's Counties
(Sources: Healthy Montgomery and PGC Health Zone, 2013)

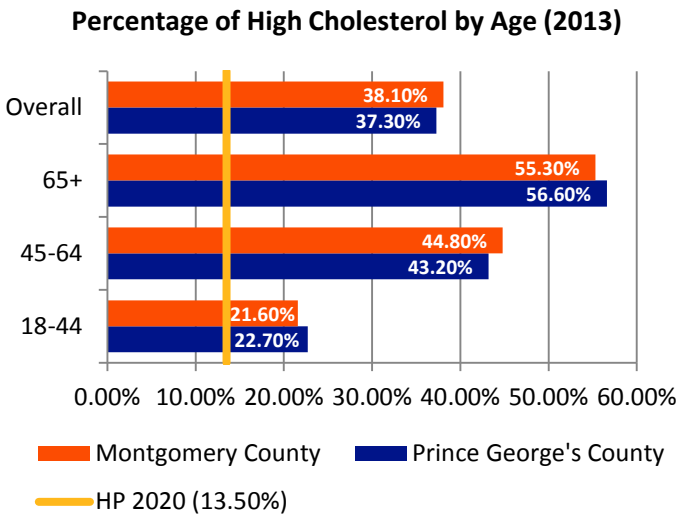


Figure 18. Prevalence of High Cholesterol by Age in Montgomery and Prince George's Counties
(Sources: Healthy Montgomery and PGC Health Zone, 2013)

Community Resources

Acute care cardiology services are provided by all hospital providers in Prince George's and Montgomery Counties. In addition, there are numerous physician providers as well as clinics that provide diagnosis and treatment for heart disease and stroke. The following are specific services for individuals with heart disease and stroke:

- Washington Adventist Hospital has specific heart and vascular services and is a designated Primary Stroke Center. In addition to the inpatient, acute care services, WAH has Cardiac Outreach Services that provide screening, education, and support. The hospital also sponsors specific cardiac outreach events to provide early detection and prevention of heart-related diseases. Free cardiac screening is provided on a yearly basis to raise awareness and to educate the community.
- Support groups, such as "Heart to Heart" and "Mended Hearts", are offered in both Montgomery and Prince George's Counties.
- The American Heart Association provides education, support, research and advocacy.
- The Montgomery County Stroke Association provides resources and support as well as promoting stroke awareness. There are stroke clubs and support groups available, some of which meet in senior centers.
- Lifestyle change programs, such as Complete Health Improvement Program (CHIP), are offered in various settings including congregations.
- Montgomery County Health Department has an African American Health Program that addresses heart health.
- Adventist HealthCare Rehabilitation offers both inpatient and outpatient rehabilitation services for stroke and works with the Montgomery County Stroke Association to provide resources and support groups.

Section IV: Findings

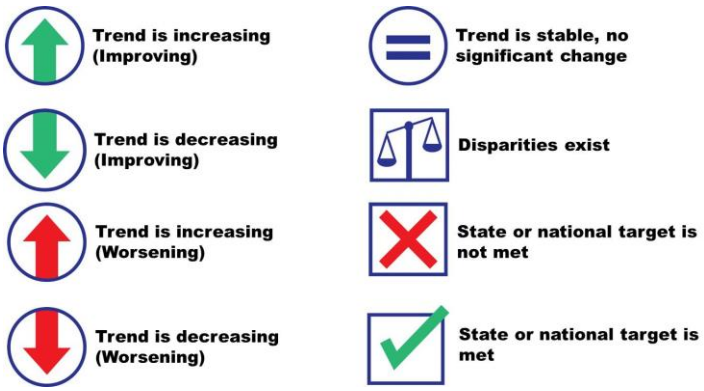
Part B:
Secondary Data Findings

Chapter 3: Diabetes

Diabetes

KEY FINDINGS

- Type 2 diabetes is becoming more prevalent in children aged 10 or older, due to increases in overweight and obesity.
- There is a higher prevalence of diabetes in Prince George's County (11.5 percent) than Montgomery County (7 percent).
- In Montgomery County, the groups with the highest prevalence of diabetes included Asians (9.3 percent), males (7.7 percent), and those that were 65 years of age or older (19.2 percent).
- In Prince George's County, the groups with the highest prevalence of diabetes included those in the "other" race/ethnicity category (not identifying themselves as Black, white, Asian, or Hispanic) (14.9 percent), females (12.5 percent), and those 65 years of age or older (35.8 percent).
- Black and American Indian/Alaska Native populations in Montgomery County have the highest rates of age-adjusted ER and hospitalization visits due to diabetes complications and uncontrolled diabetes.
- Montgomery County ranked in the top half of all counties in Maryland for the following measures:
  - Percentage of adults with diabetes
  - Age-adjusted death rate due to diabetes
  - Age-adjusted ER and hospitalization rates due to diabetes, short and long-term complications of diabetes, and uncontrolled diabetes
  - Overall ER rate due to diabetes
- Prince George's County was rated in the bottom half of all counties in Maryland for all the measures above, except the ER visit rate due to diabetes.
- The SHIP 2017 target for ER visit rates due to diabetes (186.3 per 100,000) was met by both Montgomery County (95 per 100,000) and Prince George's County (169 per 100,000).
- The Medicare population appears to be experiencing an increase in the overall prevalence of diagnosed diabetes cases.



Diabetes

Impact

Diabetes Mellitus is a metabolic condition that affects how the body regulates glucose levels in the blood. In type 1 diabetes, the body does not produce enough insulin, which results in excess blood glucose accumulation in the blood. This excess glucose can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations.[1] This type of diabetes can develop at any age and there is no known way to prevent it. In adults, type 1 diabetes accounts for about 5 percent of all diagnosed cases of diabetes. The majority of diabetes cases in the U.S. are type 2 diabetes. This condition occurs when the body cannot produce insulin properly and can develop at any age. Unlike type 1 diabetes, type 2 diabetes can be prevented through healthy lifestyle choices, including proper diet and exercise. Nevertheless, about 30 percent of people will develop this disease in their lifetime. Gestational diabetes is a specific type of diabetes that develops during pregnancy. It usually disappears after the birth of the baby, but predisposes the mother to an increased risk of developing type 2 diabetes later in life.[2]

Diabetes can be a life-threatening disease that requires life-long management. It is the seventh leading cause of death in the U.S.[3]. In 2012, 29.1 million people in the U.S. (approximately 9 percent of the population) had diabetes. Of these 29.1 million, 25 percent were left undiagnosed and, therefore, at greater health risk. Eighty-six million people were pre-diabetic and 9 out of 10 were unaware that they were at risk of developing diabetes. Diabetes is also a very costly disease as $245 billion dollars were spent on medical costs, lost work and wages in 2012 for people with diagnosed diabetes[4].

Diabetes prevalence has also increased among children. While type 1 diabetes still remains the primary type of diabetes in children, type 2 diabetes is becoming more common in children 10 years of age or older[5]. This can be attributed to the increasing prevalence of obesity and being overweight in young populations.[6]

Prevalence

The overall prevalence of diabetes in Montgomery County has been stable at 7 percent since 2011. Prince George's County has also been relatively stable with the current percentage of adults with diabetes at 11.5 percent. The prevalence of diabetes in Maryland in 2014 was 10.2 percent (Figure 1). In 2014, diabetes was the sixth leading cause of death in Maryland, despite the decline in diabetes-related deaths over the past decade.[7]

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[1] Centers for Disease Control and Prevention (CDC). (2015). Basics about diabetes. Retrieved from: http://www.cdc.gov/diabetes/basics/diabetes.html

[2] CDC. (2015). 2014 National diabetes statistics report. Retrieved from: http://www.cdc.gov/diabetes/data/statistics/2014statisticsreport.html

[3] CDC. (2015). Basics about diabetes. Retrieved from: http://www.cdc.gov/diabetes/basics/diabetes.html

[4] CDC. (2015). 2014 National diabetes statistics report. Retrieved from: http://www.cdc.gov/diabetes/data/statistics/2014statisticsreport.html

[5] Centers for Disease Control and Prevention: National diabetes statistics report: estimates of diabetes and its burden in the United States, 2014. Atlanta, GA: U.S. Department of Health and Human Services; 2014. Retrieved from: https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf

[6] Fagot-Campagna A, Pettitt DJ, Engelgau MM, et al. Type 2 diabetes among North American children and adolescents: an epidemiologic review and a public health perspective. The Journal of pediatrics. May 2000;136(5):664-672.

[7] Department of Health and Mental Hygiene Vital Statistics Administration. *Maryland Vital Statistics Annual Report 2014*. Baltimore, MD: 2015.

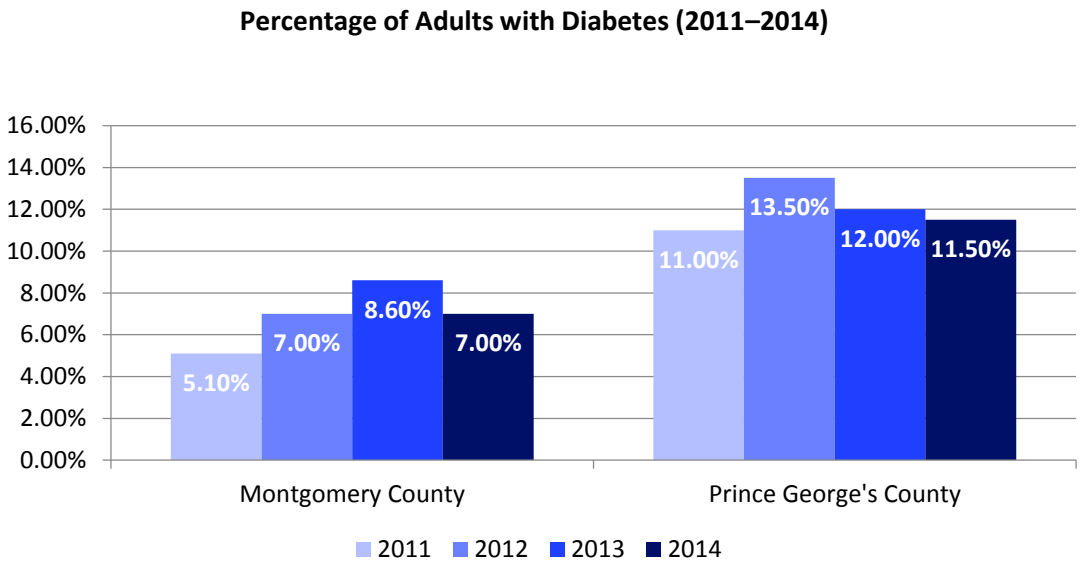


Figure 1. Percentage of Adults with Diabetes, 2011–2014. Excludes diabetes cases during pregnancy. Crude rates not comparable across county populations
(Source: Maryland BRFSS Data, 2014)

Health disparities become evident when the overall diabetes population is stratified by different sociodemographic groups. In Montgomery County, Asians experienced the highest prevalence of diabetes at 9.3 percent compared to Blacks at 7.6 percent and whites at 7.2 percent. In Prince George's County, the greatest disparity was between Hispanics and the other racial/ethnic groups. Over 13 percent of the white, Black and "Other" groups had diabetes in 2014 compared to only 2 percent of Hispanics and 9.9 percent of Asians (Figure 2). Males were more likely to be diagnosed with diabetes in Montgomery County at 7.7 percent compared to 6.3 percent of female, whereas females were more likely to be diagnosed with diabetes in Prince George's County (12.5 percent) compared to their male counterparts (10.4 percent) (Figure 3). In terms of age, the older age group of 65 years or more was the most likely to have a diabetes in both Montgomery and Prince George's Counties (Figure 4).

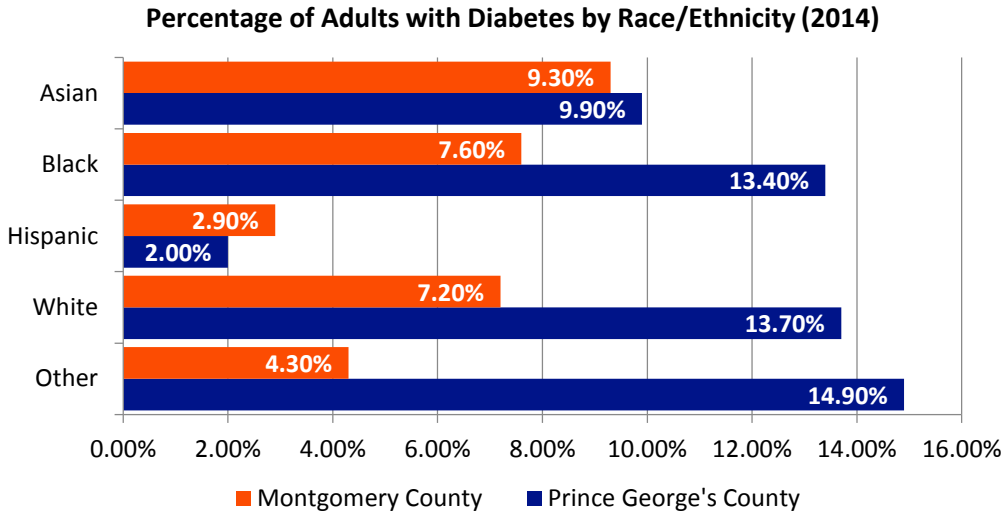


Figure 2. Percentage of Adults with Diabetes by Race/Ethnicity, 2014
Note: Excludes diabetes cases during pregnancy.
Crude rates not comparable across county populations
(Source: Maryland BRFSS Data, 2014)

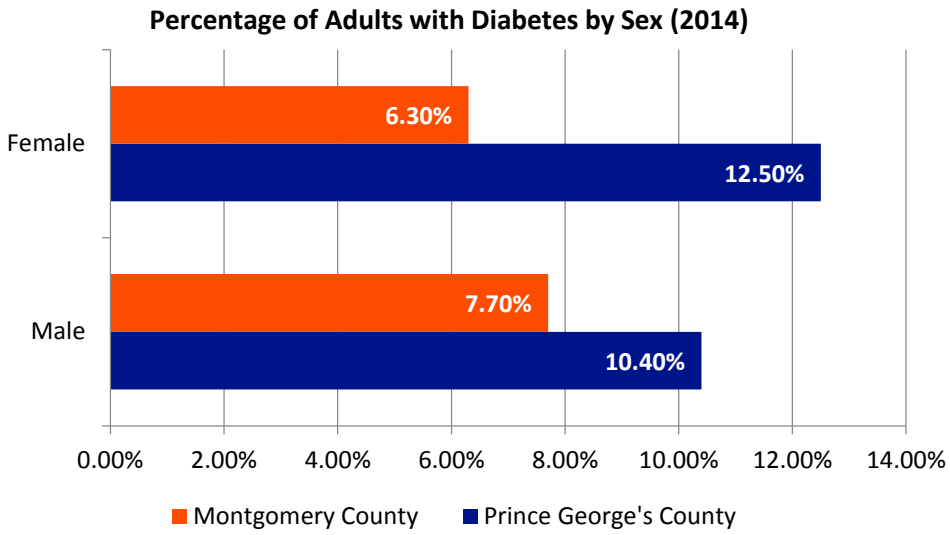


Figure 3. Percentage of Adults with Diabetes by Sex, 2014
Note: Excludes diabetes cases during pregnancy.
Crude rates not comparable across county populations
(Source: Maryland BRFSS Data, 2014)

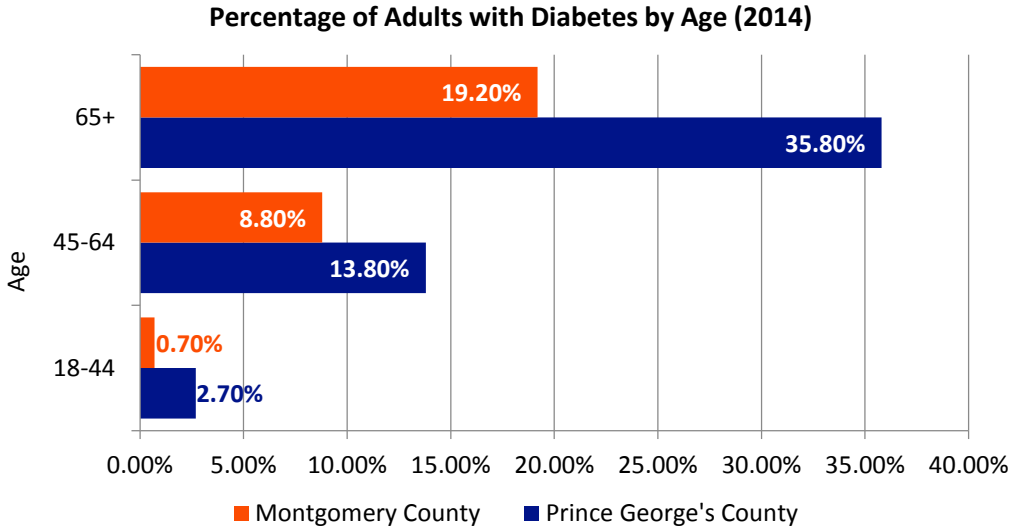


Figure 4. Percentage of Adults with Diabetes by Age, 2014
Note: Excludes diabetes cases during pregnancy.
Crude rates not comparable across county populations
(Source: Maryland BRFSS Data, 2014)

The percentage of the Medicare population having received treatment for diabetes also illustrates the burden of disease on this potentially financially-strained group. There has been a slight gradual increase in proportion from 2009 to 2014 for both Montgomery and Prince George's Counties. As of 2014, 24.7 percent of Montgomery's Medicare population and 34.9 percent of Prince George's Medicare population have been treated for diabetes (Figure 5).

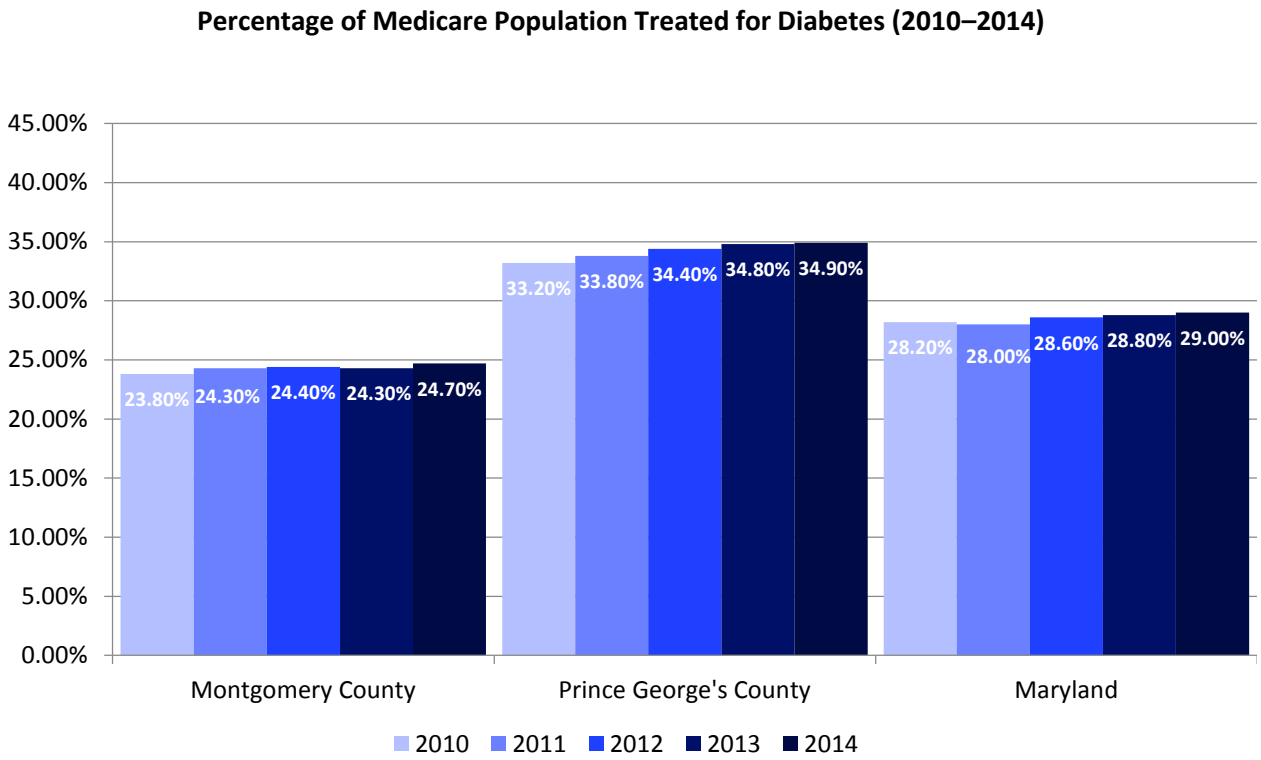


Figure 5. Percentage of Medicare Population Treated for Diabetes, 2010–2014
(Source: Centers for Medicare and Medicaid Services, 2014)

Mortality

While the aforementioned data give an overview of the percentage of the population affected by diabetes, health indicators such as mortality, hospitalization and ER utilization rates demonstrate the poor diabetes management in the population, in addition to the strain they impose on the medical system. For the 2012 to 2014 measurement period, the age-adjusted death rate due to diabetes was 12.6 per 100,000 in Montgomery County and 28.3 per 100,000 in Prince George's County. These rates have remained fairly consistent since 2007 with a slight decrease indicated in Prince George's County and Maryland as a whole (Figure 6).

Between 2011 and 2014, Montgomery and Prince George's Counties both successfully met the SHIP 2017 target for ER rate due to diabetes with consistent rates over time. In 2014, the ER rate due to diabetes in Montgomery County was 95 visits per 100,000 population while the rate in Prince George's County was 169 visits per 100,000 population. Both of these rates are below the Maryland SHIP target of 186.3 visits per 100,000 population. (Figure 7).

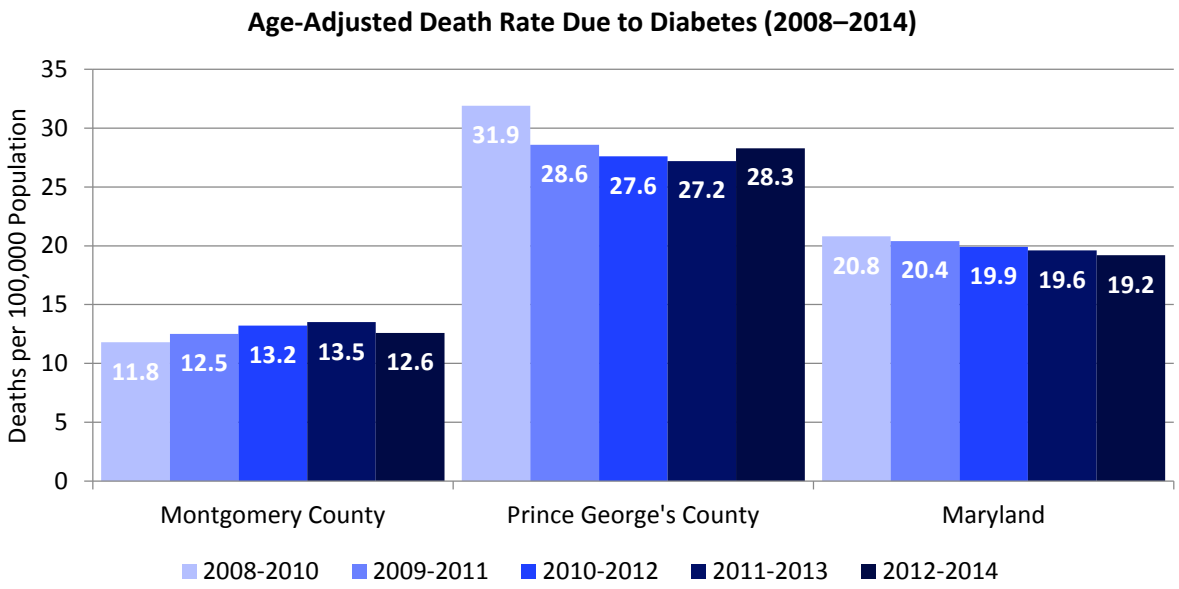


Figure 6. Age-Adjusted Death Rate Due to Diabetes per 100,000 Population, 2008-2014
(Source: Maryland Department of Health and Mental Hygiene (DHMH), 2014)

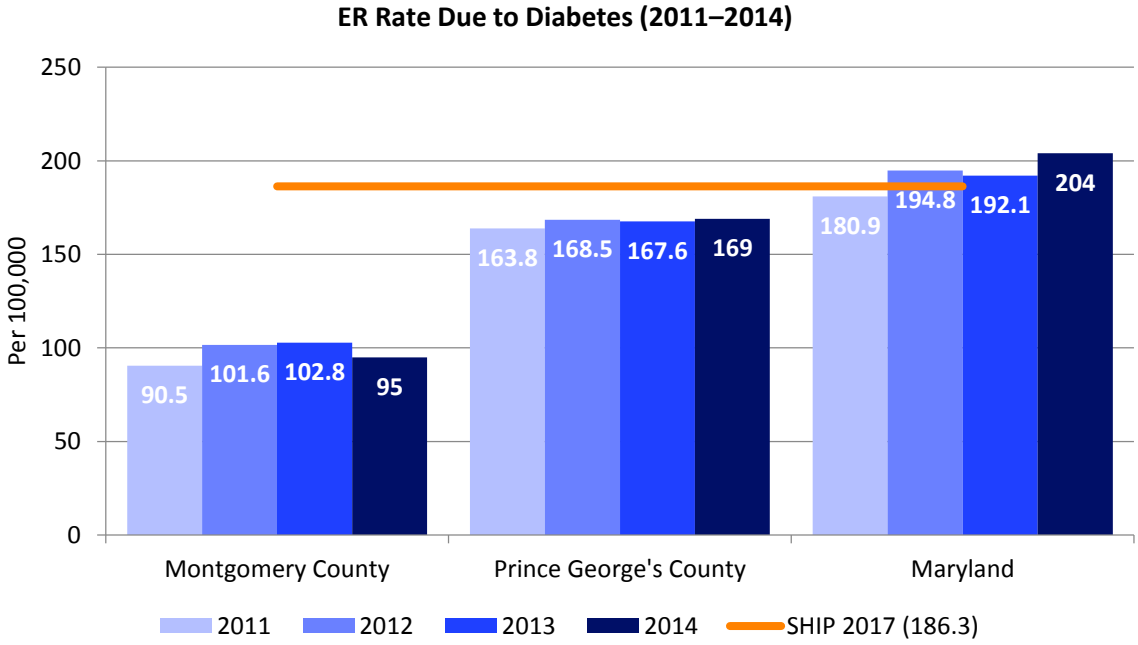


Figure 7. ER Rate Due to Diabetes per 100,000 Population, 2011–2014
(Source: DHMH, 2014)

In Montgomery County, the age-adjusted hospitalization and ER rates due to diabetes, short and long-term complications of diabetes, and uncontrolled diabetes rates followed similar patterns as seen in Tables 1, 2 and 3 below by age and sex. Diabetes rates for 2009 to 2011 were highest in the oldest age group and in males. However, while diabetes prevalence was highest in Asians, the rates of hospitalization and ER visits were higher in Blacks and American Indian/Alaskan Natives. Overall, during the 2009 to 2011 measurement period, Montgomery County's age-adjusted ER rate was 10.9 per 10,000 (Table 1) and the county's hospitalization rate was 11.6 per 10,000 (Table 2). In Prince George's County, age-adjusted hospitalization rates due to diabetes, short and long-term complications of diabetes, and uncontrolled diabetes followed similar patterns to the prevalence data for age and race/ethnicity. However, the Prince George's hospitalization rate was higher in males despite higher diabetes prevalence in females (Table 3).

Characteristic	Diabetes	Short-term Complications of Diabetes	Long-Term Complications of Diabetes	Uncontrolled Diabetes
TREND				
2008-2010	9.7	0.2	4.8	0.3
2009-2011	10.9	0.2	5.6	0.4
AGE				
18-19	8.2	N/A	3.9	N/A
20-24	4.8	N/A	1.7	N/A
25-44	6	N/A	2.5	0.3
45-64	13.3	N/A	6.2	0.4
65-84	21.9	N/A	14.1	0.6
85+	22.8	N/A	14.1	
SEX				
Male	12.5	0.2	6.8	0.5
Female	9.6	0.2	4.5	0.3
RACE				
American Indian or Alaskan Native	48.8	N/A	21.4	N/A
Asian or Pacific Islander	4.5	N/A	2.3	N/A
Black	34	0.5	16.6	1.4
White	8	0.2	4.3	0.2

Table 1. Montgomery County Age-Adjusted ER Rates per 10,000 Population 18+ Years Old, 2008–2011
(Source: Healthy Montgomery, 2011)

Characteristic	Diabetes	Short-term Complications of Diabetes	Long-Term Complications of Diabetes	Uncontrolled Diabetes
TREND				
2007-2009	11.2	3.1	7.1	0.8
2008-2010	11.8	3.3	7.5	0.8
2009-2011	11.6	3.3	7.2	0.9
AGE				
18-19	12	8.2	3.2	
20-24	7.2	5.5	1	
25-44	6.3	2.9	2.7	0.5
45-64	12	2.9	7.8	1.1
65-84	24.6	2.6	20.4	1.4
85+	32.1	3.6	26.2	1.9
SEX				
Male	13.7	3.7	8.7	1
Female	9.9	3	6	0.7
RACE				
American Indian/Alaskan Native	22.5	N/A	N/A	N/A
Asian/Pacific Islander	3.7	0.8	2.5	N/A
Black	30.9	9.2	18.4	2.9
White	7.8	2.1	5.2	0.4

Table 2. Montgomery County Age-Adjusted Hospitalization Rates per 10,000 Population 18+ Years Old, 2007–2011
(Source: Healthy Montgomery, 2011)

Characteristic	Diabetes	Short-term Complications of Diabetes	Long-Term Complications of Diabetes	Uncontrolled Diabetes
AGE				
18-19	9.4	8.4	N/A	N/A
20-24	15.4	9.4	5.3	0.6
25-44	17.7	7	8.3	1.8
45-64	34.6	9.7	19.9	4.2
65-84	54.9	7.8	42	4.6
85+	63.5	N/A	54.7	5.2
SEX				
Male	32.8	9.4	19.7	3
Female	25.6	7.2	15.3	2.7
RACE				
American Indian/Alaskan Native	25.3	N/A	17	N/A
Asian/Pacific Islander	5.2	N/A	3.9	N/A
Black	36	10.2	21.5	3.6
White	16.2	5.5	9.7	0.9

Table 3. Prince George's County Age-Adjusted Hospitalization Rates per 10,000 Population, 18+ Years Old, 2009–2011
(Source: PGC Health Zone, 2014)

Community Resources

There are a variety of diabetes-related services and programs available for residents in Washington Adventist Hospital's Community Benefit Service Area. These include hospital-based, community-based, and health department programs and services:

- Washington Adventist Hospital, Dimensions Healthcare, and Holy Cross Hospital offer inpatient and outpatient services and education for diabetes. This includes education classes and support. Washington Adventist Hospital also has a specialized Center for Advanced Wound Care & Hypobaric Medicine which treats wounds due to complications of diabetes.
- The Montgomery County Health Department provides free monthly diabetic education classes that meet in various locations in the county, including at churches and other faith communities' spaces.
- The Prince George's County Health Department offers a free diabetes self-management education class. PG County Health Department also partnered with Doctors Community Hospital's Joslin Diabetes Center to implement the On the Road Diabetes Outreach Program which offers free Diabetes education classes and free lab screenings throughout the county. On the Road to Wellness is the online version of the On the Road Diabetes Classes offered in English and will be soon available in Spanish.
- Dimensions Healthcare offers a diabetic help line, Monday – Friday, 9 a.m. – 5 p.m.
- The American Diabetes Association provides education, advocacy and support groups. They also provide these resources in Spanish.
- The University of Maryland Extension Services, which involves the College of Agriculture and Natural Resources, provides education to both Latino/Hispanic and African American communities.
- Right at Home, an in home care and assistance organization, provides caregivers who can help provide community members with a health care plan that focuses on diabetes management. A few services include appropriate food and meal planning, grocery shopping services and education on blood glucose levels.

Section IV: Findings

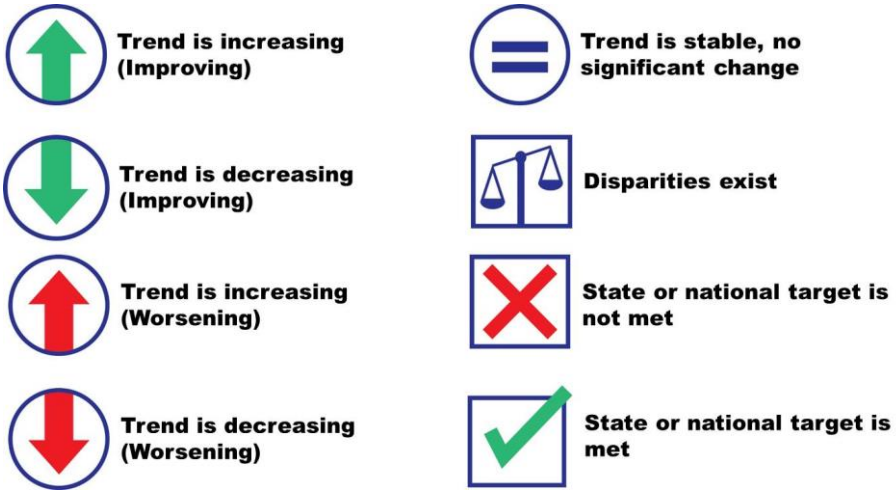
Part B:
Secondary Data Findings

Chapter 4: Obesity

Obesity

KEY FINDINGS

- Montgomery County has met the SHIP 2017 and Healthy People 2020 targets for overall percentage of adult residents who are overweight or obese.
- Prince George's County has not met the SHIP 2017 and Healthy People 2020 targets for overall percentage of adult residents who are overweight or obese.
- Hispanic and Black adult Montgomery County residents do not meet the targets and are disproportionately burdened. In Prince George's County, the burden is on whites, Blacks and those classifying themselves as "Other." In terms of age, the most burdened group was the 45 to 64 year olds.
- Montgomery County has met the SHIP 2017 target for adolescents who are obese.
- Prince George's County has not met the SHIP 2017 target for adolescents who are obese.
- The rate of Montgomery County residents experiencing food insecurity (that is, reduced access to quality, nutritious food items) is 7 percent, well below Prince George's County's average of 15.5 percent and Maryland's average of 12.7 percent.
- Montgomery County ranks number one in the state for healthy behaviors. The percentage of residents that engage in healthy diet and exercise patterns meets the target in all race groups except Hispanics. Prince George's County ranks 11th for this measure.



Obesity

Impact

Adult obesity is defined as having a body mass index (BMI) greater than or equal to 30. Being overweight is defined as having BMI of greater than or equal to 25. Obesity continues to be a highly prevalent condition in the United States with approximately 35 percent of adults and 17 percent of children 2 through 18 years of age qualifying as obese. Obesity is of particular concern because it is associated with many adverse health outcomes including heart disease, stroke, type 2 diabetes, and cancer. There also appear to be disparities in the burden of obesity across different demographic groups.[1][2]

Prevalence

As of 2014, Maryland has the 26th highest adult obesity rate in the nation with 30 percent of its population being categorized as obese. By race/ethnicity, 26 percent of white, 38 percent of Black and 26 percent of Hispanic residents are obese with similar percentages of obesity occurring by sex.[3] At the county level, Montgomery County has successfully met the target for obesity in its population from 2011–2014. Prince George's County consistently fails to meet the target set forth by Healthy People 2020 and SHIP 2017 for the percentage of its residents that are overweight or obese (Figures 1 and 2).

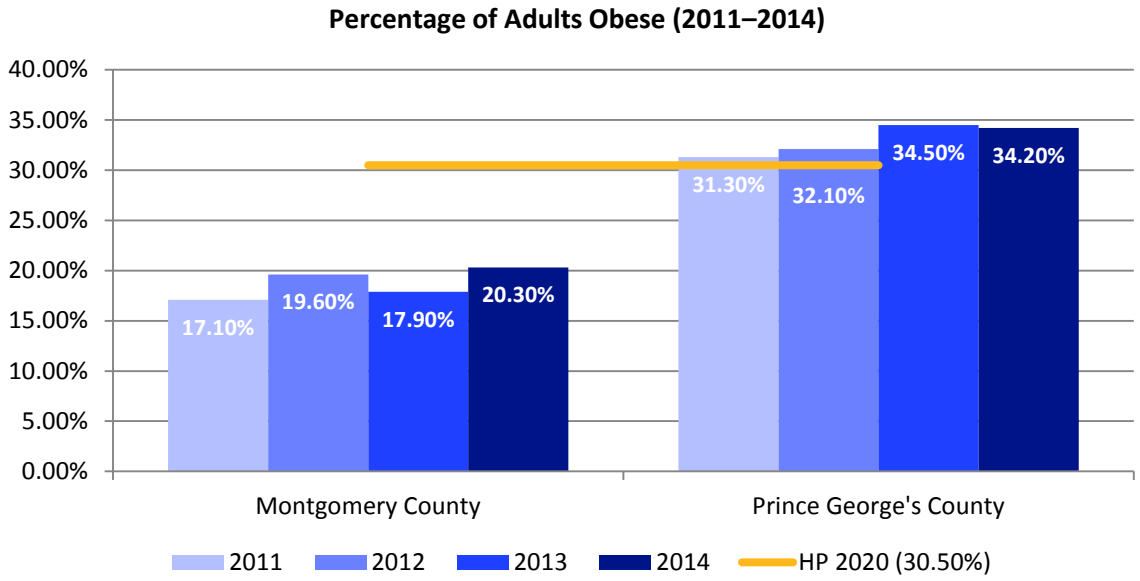


Figure 1. Percentage of Adults That Are Obese (BMI > 30), 2011–2014
(Source: Healthy Montgomery, PGC Health Zone)

[1] Centers for Disease Control and Prevention (CDC) – Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Childhood obesity facts. Retrieved February 22, 2016, from http://www.cdc.gov/obesity/data/childhood.html

[2] CDC - Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention ad Health Promotion. Adult obesity facts. Retrieved February 22, 2016, from: http://www.cdc.gov/obesity/data/adult.html

[3] The State of Obesity. (2016). The state of obesity: Maryland. Retrieved from: http://stateofobesity.org/states/md/

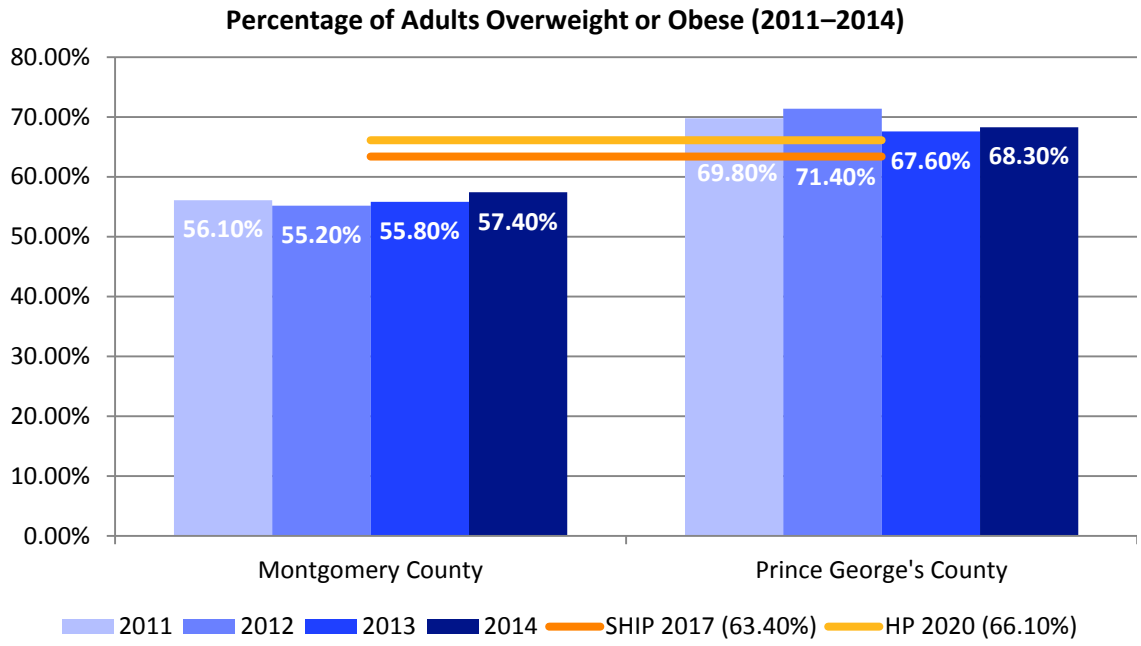


Figure 2. Percentage of Adults That Are Overweight or Obese (BMI >=25), 2011–2014

(Source: Maryland Behavioral Risk Factor Surveillance System (BRFSS), 2014)

Similar to the state level, demographics may play an important role in overall obesity rates in each county. In Montgomery County, only 36.7 percent of Asians are overweight or obese compared to 76.6 percent of Hispanics and 67.9 percent of Blacks. In Prince George's County, 74.8 percent of Black residents and 76 percent of those classified as "Other" are overweight or obese compared to 66 percent of whites, 55 percent of Hispanics and 21.2 percent of Asians (Figure 3).

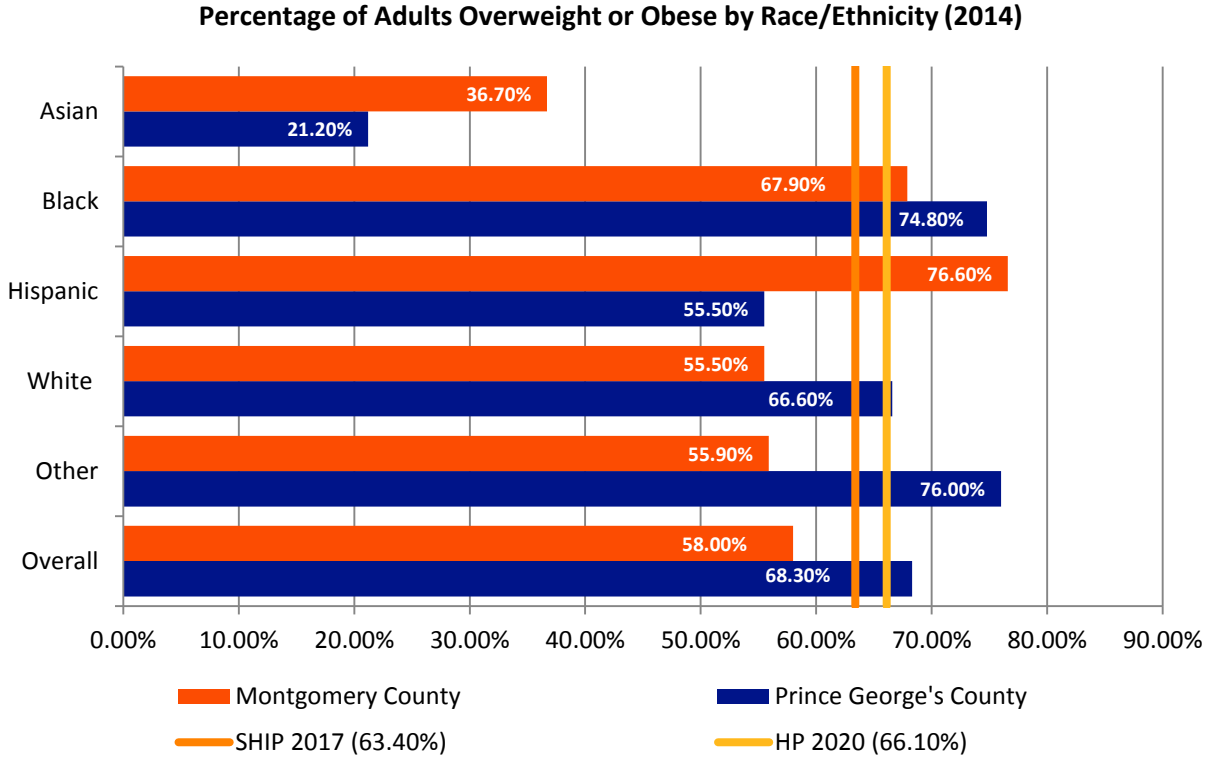


Figure 3. Percentage of Adults That Are Overweight or Obese by Race/Ethnicity (BMI >= 25), 2014
(Source: Maryland BRFSS, 2014)

Females are more likely to be obese in Prince George's County at 71.5 percent compared to 64.9 percent of males. In Montgomery County, an inverse sex disparity exists, with more males (63.4 percent) overweight or obese than females (51.5 percent) (Figure 4). The rate of overweight and obese females and males in Montgomery County meets both the SHIP 2017 and Healthy People 2020 targets, whereas the males in Prince George's County meet only the Healthy People 2020 target.

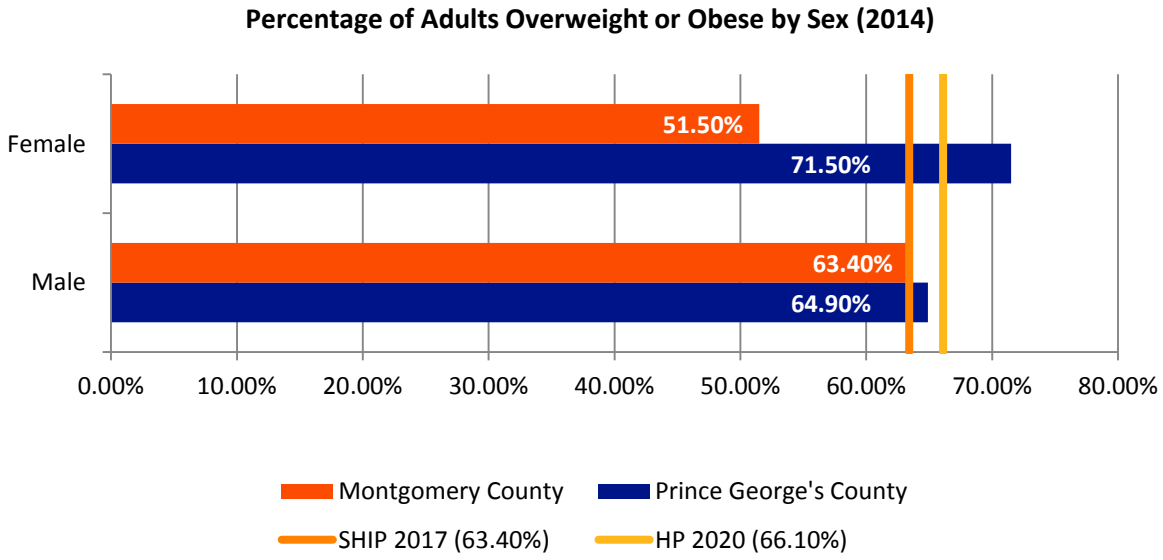


Figure 4. Percentage of Adults That Are Overweight or Obese by Sex (BMI >= 25), 2014
(Source: Maryland BRFSS, 2014)

By age, the proportion of overweight or obese individuals increases with each age bracket except in Montgomery County, where there is a slightly lower rate of obesity in the 65+ population compared to the 45–64 year old population. In both counties, the 18–44 year old populations meet the SHIP 2017 and Healthy People 2020 targets for percentage of the population overweight or obese (Figure 5).

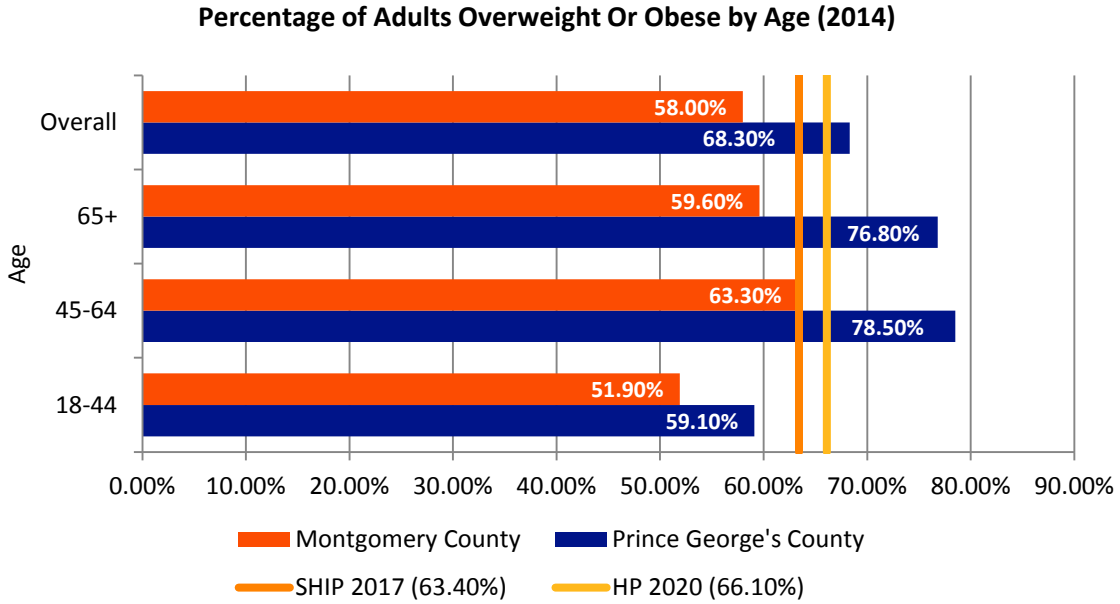


Figure 5. Percentage of Adults That Are Overweight or Obese

by Age (BMI >= 25), 2014
(Source: Maryland BRFSS, 2014)

Child Obesity

As of 2012, the CDC reports that 17 percent of children 2–18 years of age in the U.S. are obese. Similar to adults, Hispanic and Black children are disproportionately burdened with 22.4 percent and 20.2 percent obese, respectively, compared to 14.1 percent of white children.[4]

Adolescents

In the U.S., the percentage of adolescents aged 12–19 years old who are obese increased from 5 percent to nearly 21 percent between 1980 and 2012.[5] However, there has been no significant change in the rate of obesity during the most recent measurement period of 2011 to 2013. This stagnation is also seen in Maryland with an overall obesity rate of 11 percent in 2013.[6] By gender, the percentage of males who are obese has decreased from 15.5 percent in 2007 to 13.8 percent in 2013. Females, on the other hand, experienced an increase in the rate of obesity from 8.5 percent to 10.5 percent between 2009 and 2011. This rate then dropped to 8.2 percent in 2013.[7] At the county level, Montgomery County meets the SHIP 2017 target of 10.7 percent and HP 2020 target of 16.1 percent for obese adolescents with only 7.1 percent of the adolescent population obese. Prince George's County, with 13.7 percent of its adolescent population obese, meets the goal set by HP2020, but does not meet the goal set by SHIP 2017 (Figure 6).

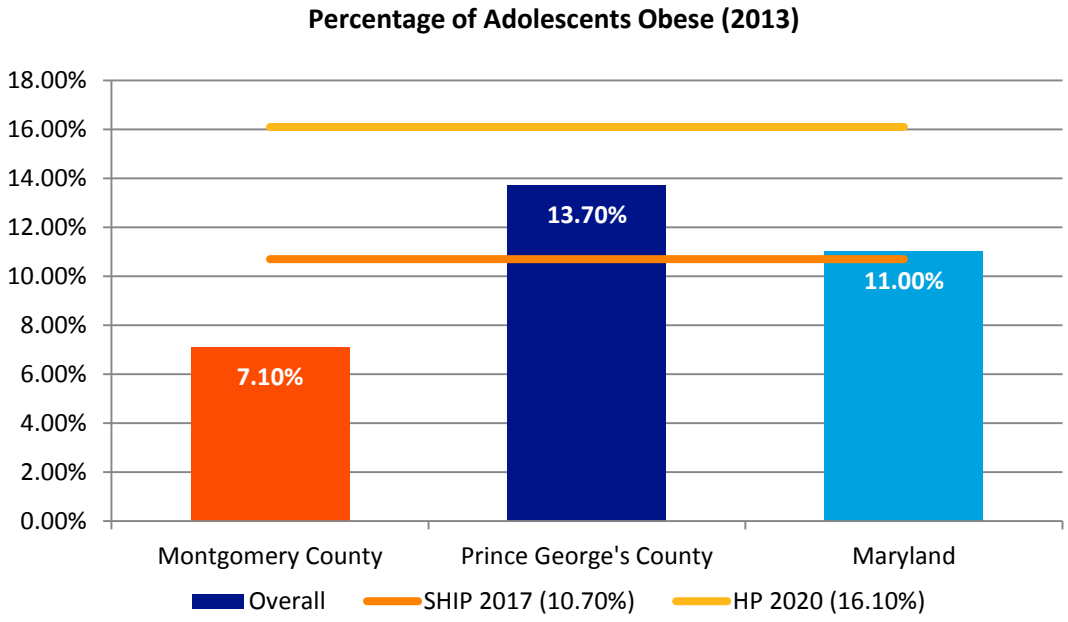


Figure 6. Adolescents that are obese (BMI >= 95th percentile) in 2013
(Source: CDC - Youth Risk Behavior Survey Data, 2013)

[4] CDC – Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Childhood obesity facts. Retrieved February 22, 2016, from http://www.cdc.gov/obesity/data/childhood.html
[5] CDC – Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Childhood obesity facts. Retrieved February 22, 2016, from http://www.cdc.gov/obesity/data/childhood.html
[6] CDC – Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Childhood obesity facts. Retrieved February 22, 2016, from http://www.cdc.gov/obesity/data/childhood.html
[7] CDC. (2013). Youth Online: High School YRBS. Retrieved from: https://nccd.cdc.gov/youthonline/app/Results.aspx?%20LID=MD

Children under Twelve

The prevalence of obesity among children ages two to five years in the U.S. has decreased significantly from 13.9 percent in 2003–2004 to 8.4 percent in 2011–2012.[8] During the 2011 to 2012 measurement period, 8.4 percent of two to five year olds were obese compared to 17.7 percent of six to 11 year olds and 20.5 percent of 12 to 19 year-olds (Figure 7). As with adults, childhood obesity is also more common among certain racial and ethnic groups.[9]

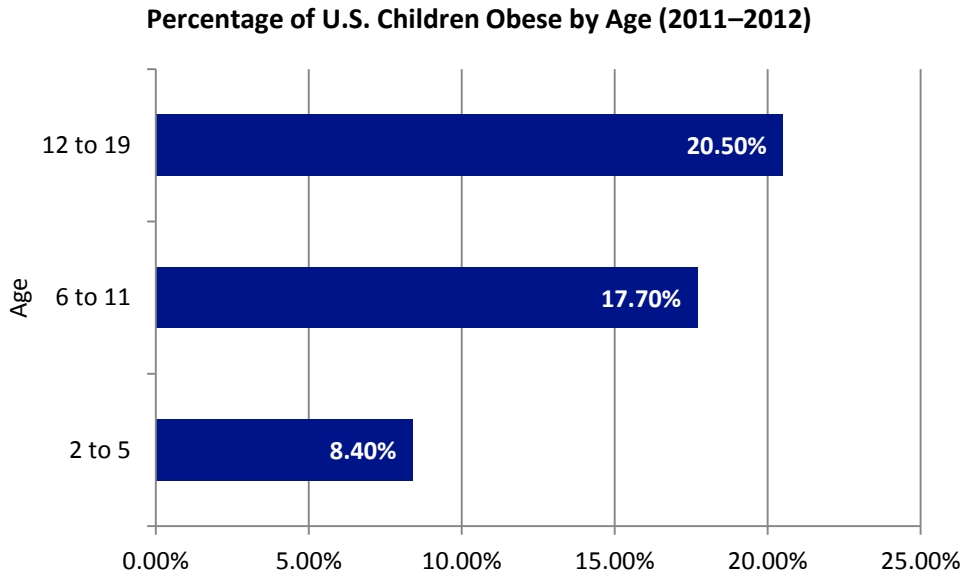


Figure 7. Percentage of US children that are obese (BMI >= 95th percentile) in 2011–2012 (Source: CDC - Childhood Obesity Facts, 2016)

[8] CDC – Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Childhood obesity facts. Retrieved February 22, 2016, from http://www.cdc.gov/obesity/data/childhood.html

[9] CDC – Division of Nutrition, Physical Activity, and Obesity, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Childhood obesity facts. Retrieved February 22, 2016, from http://www.cdc.gov/obesity/data/childhood.html

Healthy Weight Behaviors

According to County Health Rankings, Montgomery County was ranked first in the state of Maryland in 2016 for various health behaviors including: obesity; food environment; physical inactivity; access to exercise opportunities; smoking; and drinking. Prince George's County ranked 11th in the state for the same measure.[10]

Diet

In Montgomery County, 70.4 percent of the adult population consumes less than five servings of fruits and vegetables daily. This proportion is higher than the Prince George's County average of 67.6 percent and lower than Maryland's average of 77.6 percent (Figure 8). However, the rate of Montgomery County residents experiencing food insecurity (that is, reduced access to quality, nutritious food items) is 7 percent, well below Prince George's County's average of 15.5 percent and Maryland's average of 12.7 percent (Figure 9).[11]

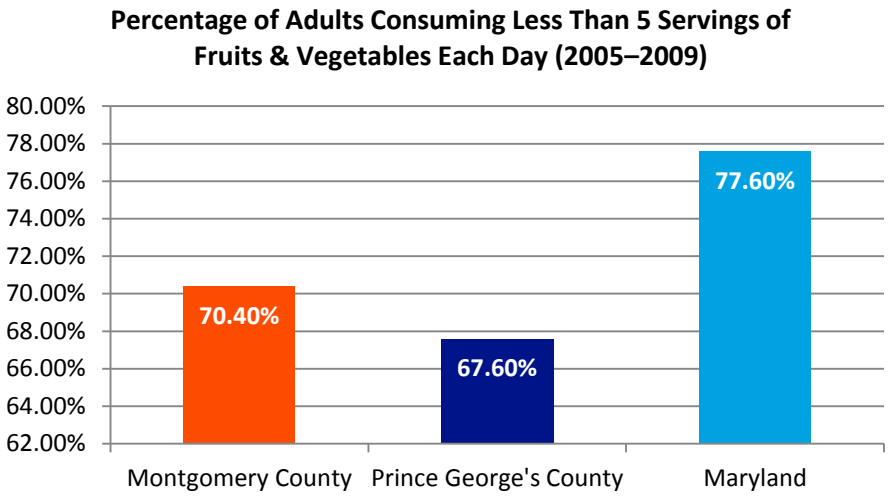
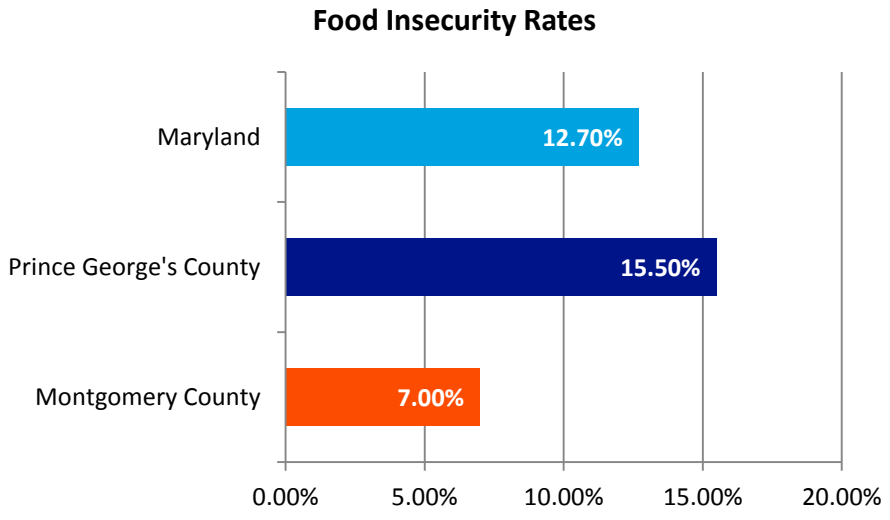


Figure 8. Percentage of Adults Consuming Less Than 5 Servings of Fruits and Vegetables Each Day (Source: Maryland BRFSS, 2010)



[10] University of Wisconsin: Population Health Institute. (2016). County Health Rankings. Retrieved from: http://www.countyhealthrankings.org/app/maryland/2014/compare/snapshot?counties=24_031%2B24_033

[11] Feeding America. (2016). Food insecurity in Maryland. Retrieved from: http://map.feedingamerica.org/county/2014/overall/maryland

Figure 9. Percentage of Food Insecure Population.
(Source: Feeding America. Map the Meal Gap, 2014)

According to the Maryland Youth Behavior Survey from 2011, 25.0 percent of students in grades 9 through 12 consume the daily recommended amount of 5 servings of fruits and vegetables each day. This rate has remained unchanged since 2005. Males are more likely than females to meet this requirement.[12]

Physical Activity

In 2012, Prince George's County and Montgomery County both met the targets set forth by HP 2020 and SHIP 2017 for percentage of physically active adults. However, in 2013, Prince George's County dropped substantially to only 47.4 percent of adults participating in physical activity and failed to meet either target. This drop is also reflected in Maryland state participation levels in 2012 and 2013. In Prince George's County, only 7.18 percent of residents in have access to recreation and fitness facilities which is below the Maryland average of 11.1 percent (Figure 10).[13]

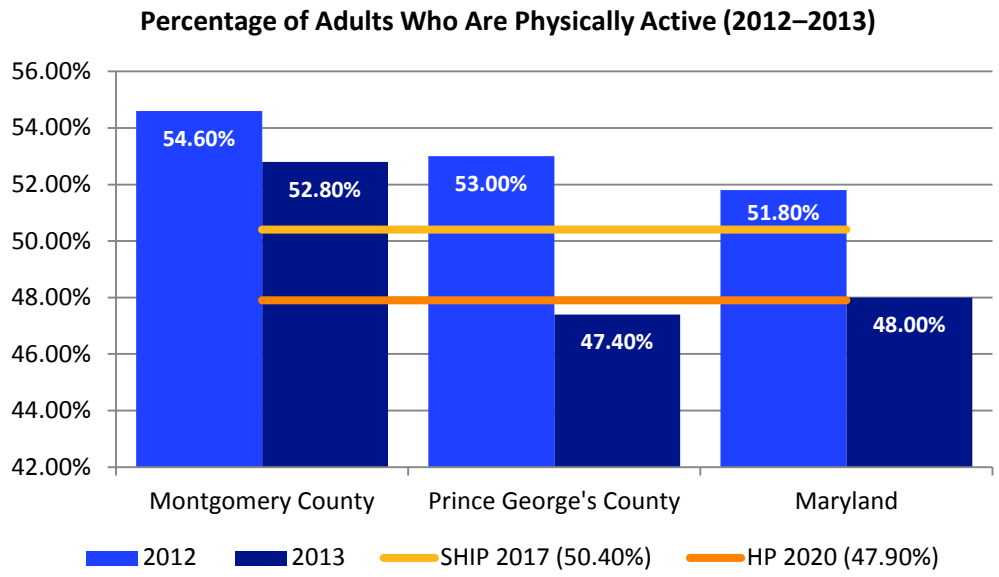


Figure 10. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week in 2012–2013
(Source: Maryland BRFSS, 2013)

In Prince George's County in 2012, only 44.6 percent of females participated in physical activity compared to over 50 percent of males (Figure 11). In addition, only 33.6 percent of Hispanics and 33.9 percent of Asians participated in regular physical activity in comparison to almost 50 percent or more for every other race measured. Hispanics also suffered from the lowest percentage of physically active adults in Montgomery County with only 25.5 percent of adults engaging in 150 minutes of physical activity a week. Every other race measured meets both the HP 2020 and SHIP 2017 targets (Figure 12).

[12] MSDE and CDC. (2011). 2011 Maryland Youth Risk Behavior Survey Report. Retrieved from: http://www.marylandpublicschools.org/msde/divisions/studentschoolsvcs/student_services_alt/surveys/index.html
[13] IP3 and CARES – University of Missouri. (n.d.) Community health needs assessment data: Health indicators report. Retrieved from: http://assessment.communitycommons.org/CHNA/report?page=3&id=404&reporttype=libraryCHNA

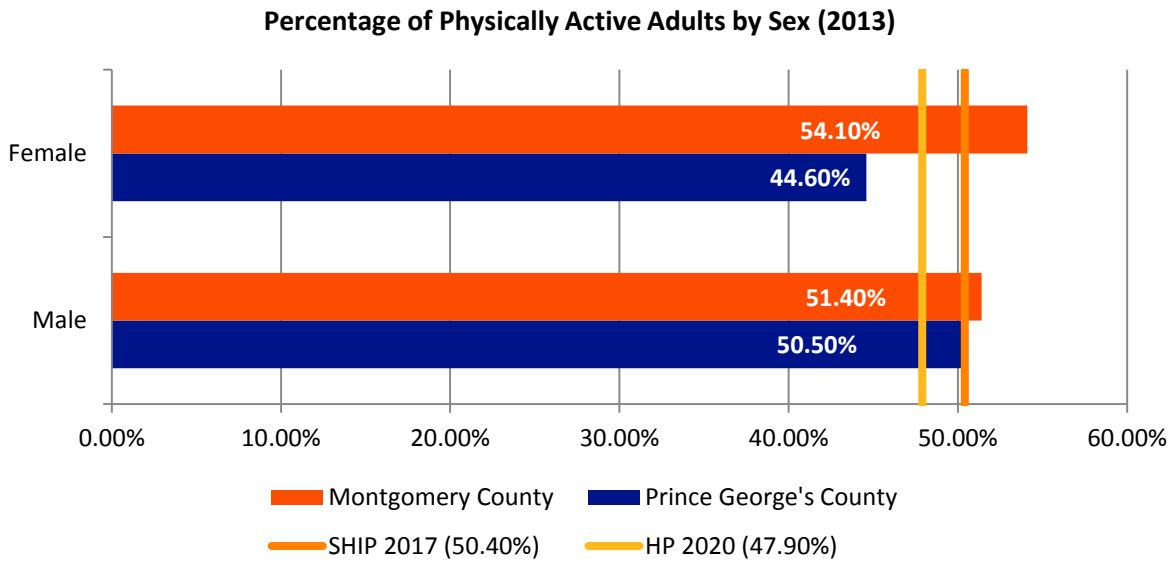


Figure 11. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week by Sex in 2013
(Source: Maryland BRFSS, 2013)

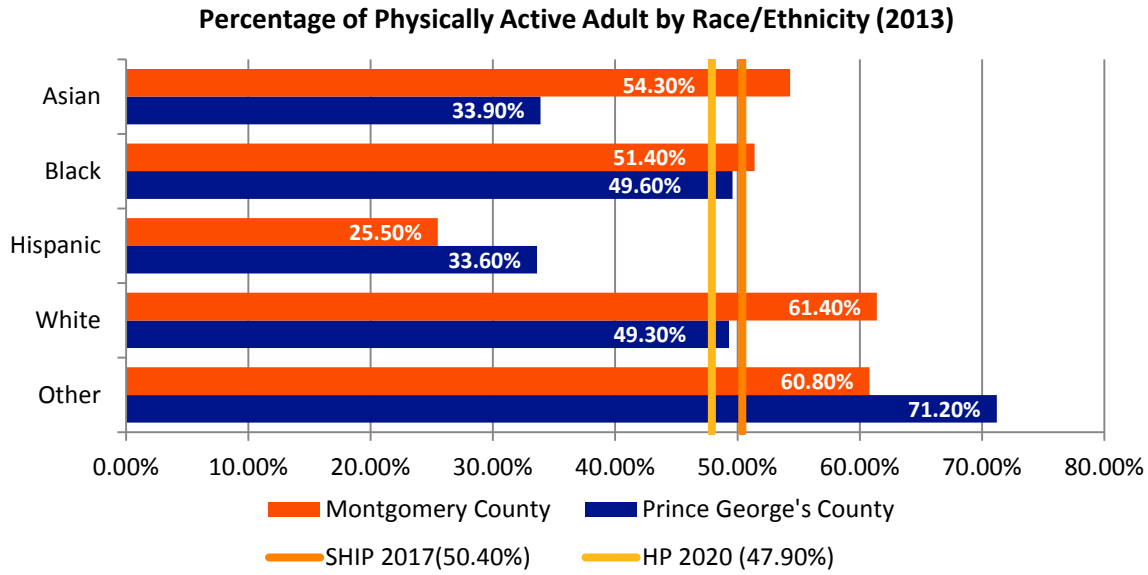


Figure 12. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week by Race/Ethnicity in 2013
(Source: Maryland BRFSS, 2013)

In Montgomery County, the rate of participation in physical activity increases with increasing age, but the reverse is true in Prince George's County with elder residents less likely to engage in physical activity. About 50 percent of 18–44 years olds participate in physical activity in both counties, but only 43.5 percent of 65+ year olds in Prince George's county and 59.3 percent of 65+ year olds in Montgomery County participate in at least 150 minutes of physical activity a week (Figure 13).

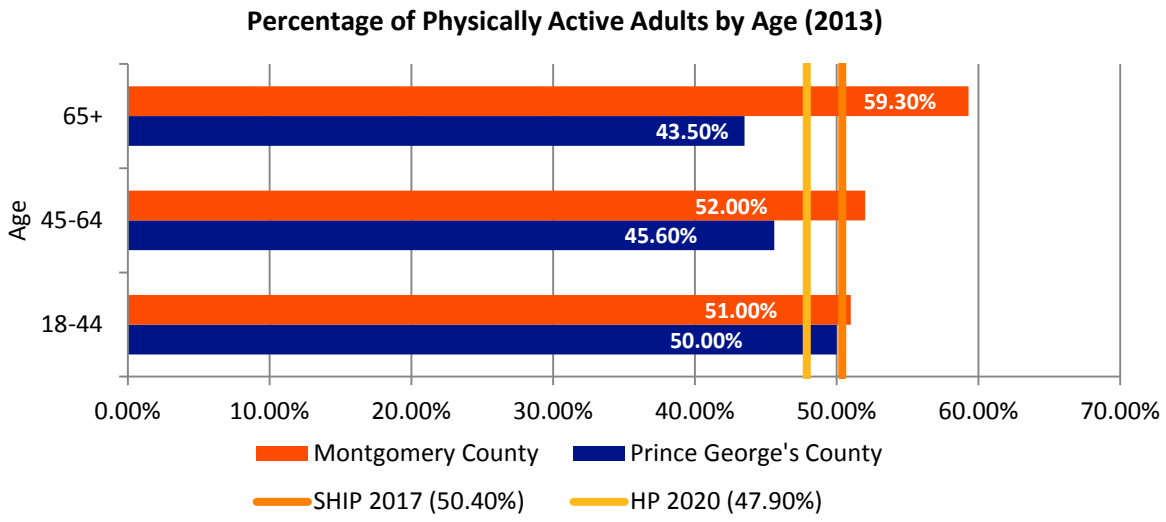


Figure 13. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week by Age in 2013
(Source: Maryland BRFSS, 2013)

Less than half of high school students in Maryland are meeting the daily recommended amount of exercise of 60 minutes each day. Males are more likely than females to meet the daily physical exercise target with 50.1 percent of males exercising 60 minutes or more each day compared to only 32.3 percent of females meeting this target. The percentage of youth who watch TV has decreased since 2005 but the inverse trend is seen in the percentage of children who play video games or computer games for three or more hours each day.[14]

[14] MSDE & CDC. (2011). 2011 Maryland Youth Risk Behavior Survey Report. Retrieved from: http://www.marylandpublicschools.org/msde/divisions/studentschoolsvcs/student_services_alt/surveys/index.html

Community Resources

- Services and resources for obesity are often incorporated within other programs addressing diabetes, heart disease, and cancer. In Adventist HealthCare Washington Adventist Hospital's Community Benefit Service Area, there are local efforts in schools, clinics, and recreational centers to reduce and prevent obesity. The Women, Infants, and Children (WIC) program also addresses obesity prevention through nutrition education.
- Prince George's County has identified obesity has an issue in the county and plans to address this issue as they develop their health initiatives. Prince George's County has programs, such as the Healthy Weight Community Outreach Initiative, the Healthy Schools program, and the Alliance for a Healthier Generation, which works to reduce the prevalence of childhood obesity. Of special note, The Alliance for a Healthier Generation's Healthy Schools Program joined with the University of Maryland Extension, Food Supplement Nutrition Education program to promote shared messages. They have provided curricula for educators, as well as built and supported school gardens.
- Prince George's County Council has approved a health initiative targeting obesity in local churches in the central most part of the county. The program is a weight loss competition program called "The Biggest Winner"
- The Prince George's County Health Department, in conjunction with NIH Heart Center, offers a free program to county residents called the "Dine and Learn Program" which provides self-care information and chronic disease prevention/management services with the goal to reduce the overall incidence and prevalence of CVD and CVD related conditions such as obesity. The PGC Health Department also offers a "Step it Up!" Family Fitness Club campaign every 1st and 3rd Wednesday of the month to promote a fun and friendly space for PGC residents to work towards their fitness goals and to combat and reduce the risk of chronic diseases.
- Both Prince George's and Montgomery Counties' Departments of Parks and Recreation have a wide range of community centers that offer classes and programs for adults and children. Classes include exercise, aquatics, sports and other classes. In Prince George's County, the Department of Parks and Recreation has a health and wellness program developed and targeted toward current health disparity regions and reflecting diverse community needs.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 5: Maternal & Child Health

Maternal & Child Health

KEY FINDINGS

- In the United States, maternal mortality has been on the rise across racial groups from 2004–2013.

- Black women have consistently higher mortality rates than white women nationally.

- Montgomery County currently meets all HP 2020 and SHIP 2017 targets for overall infant mortality rate, infants with low or very low birthweight, teen birth rate, and infant mortality due to SUIDs.

- In Montgomery County, Black women are below the targets for any maternal and infant health measure in this report while Hispanic women are below the targets for infant mortality rate, teen pregnancy rate, and early prenatal care. Asian women and infants are below the target for percent of babies with low birthweight and the more rigorous HP 2020 target for early prenatal care.

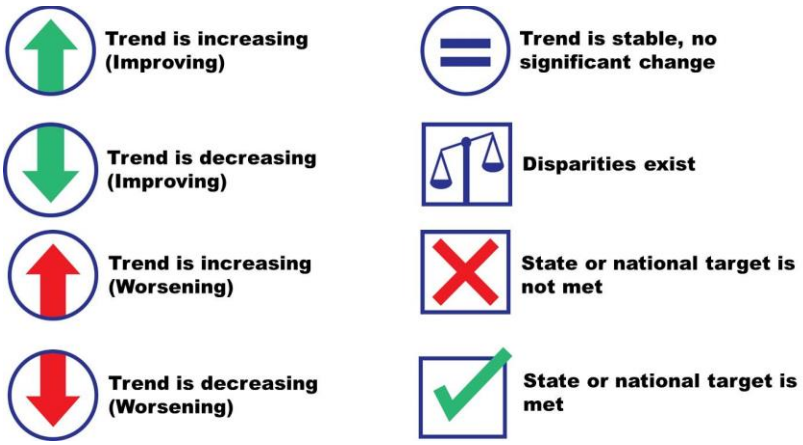
- In Prince George's County, neither HP 2020 nor SHIP 2017 targets have been met.

In Prince George's County, disparities exist across race/ethnicity and age for the Black, Hispanic, Asian and white women. By age, women over the age of 55 have higher rates of preterm deliveries.

- In Prince George's County, Black women do not meet the SHIP targets for any maternal and child health measure. Hispanic women do not meet the targets for infant mortality rate, early prenatal care and teen pregnancy. Asian women are just below the target for low birthweight babies. White women do not meet the targets for infant mortality or early prenatal care.

- An increasing number of women in Maryland are breastfeeding according to positive trends between 2009 and 2012.

- National data suggests that black women are much less likely to ever breastfeed than other race/ethnic groups.



Maternal & Child Health

Impact

Maternal and infant health is an important indicator of the health and well-being of a nation. The Centers for Disease Control and Prevention (CDC) contends that the factors that affect the health of a population as a whole also typically impact the mortality rate of infants. This makes understanding infant mortality and the risk factors surrounding it especially valuable for public health research and practice.

Infant mortality is defined as the death of an infant before one year of age. The main causes of mortality in infants in the US include birth defects, premature delivery (birth before 37 weeks of age), maternal complications of pregnancy, Sudden Infant Death Syndrome, and injuries.[1] In 2014, the U.S. infant mortality rate of 5.82 per 1,000 live births was higher than most other developed countries in the world.[23] An increase in preterm births (born at less than 37 weeks gestation) and infant mortality related to pre-term births most likely accounts for a lack of decline in infant mortality rate over the past decade;[4] pre-term birth is the largest contributor to infant death.[5] In 2014, 10.0 percent of babies born in the U.S. were pre-term and therefore at higher risk for morbidity or mortality. This is mostly due to complications related to breathing, feeding, development, cerebral palsy, and vision and hearing impairment.[6]

Low birthweight (less than 5 lbs. 8 oz.) or very low birthweight (less than 3 lbs. 5 oz.) is a common complication of infants who are born prematurely. In 2014, 8.0 percent of all infants were born with low birthweight while 1.4 percent had very low birthweight.[7] In addition to preterm delivery, maternal risk factors for low birthweight include: chronic health conditions; infections; complications with the placenta; inadequate weight gain during pregnancy; or previously having a low birthweight baby. Lifestyle choices such as smoking, alcohol, street drugs and abusing prescriptions are also associated with low birthweight. Low birthweight babies are more likely to suffer short-term effects including respiratory distress syndrome or bleeding in the brain and are also more likely to develop diabetes, high blood pressure, metabolic syndrome or obesity later in life.[8]

Prenatal care is a well-established determinant for the optimal health of the mother and infant and those having not received prenatal care are considered “high-risk” pregnancies. This is in addition to being over 35 years old, having multiple births, or being a Black or Hispanic mother. Estimates suggest up to half of pregnancy-related infant deaths can be prevented through early prenatal care including nutrition and behavior education. In addition, about 500 women die in the US annually as a result of preventable pregnancy-related complications with an additional 500 more deaths likely not reported as pregnancy-related.[9] Teenage pregnancy is another known risk factor for complications in postnatal

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[1] Centers for Disease Control and Prevention (CDC) – Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. (2016). Infant mortality. Retrieved from: http://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm

[2] CDC and National Center for Health Statistics. (2016). Infant health. Retrieved from: http://www.cdc.gov/nchs/fastats/infant-health.htm

[3] Matthews, T., Macdorman, M. F., & Thoma, M. E. (2015, August 6). Infant mortality statistics from the 2013 period linked birth/infant death data set. National Vital Statistics Reports, 64(9).

[4] CDC and National Center for Health Statistics. (2016). Infant health. Retrieved from: http://www.cdc.gov/nchs/fastats/infant-health.htm

[5] CDC – Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. (2015). Preterm birth. Retrieved from: http://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm

[6] CDC – Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion. (2015). Preterm birth. Retrieved from: http://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm

[7] CDC and National Center for Health Statistics. (2016). Birthweight and gestation. Retrieved from: http://www.cdc.gov/nchs/fastats/birthweight.htm

[8] March of Dimes. (2014). Low birth weight. Retrieved from: http://www.marchofdimes.org/complications/low-birthweight.aspx

[9] CDC. (2011). Pregnancy and prenatal care.” Retrieved from: http://www.cdc.gov/healthcommunication/toolstemplates/entertainmented/tips/pregnancyprenatalcare.html

development and long-term outcomes of the child. Teenage pregnancy rates have dropped substantially over the past few decades with the 2014 birthrate for women 15–19 at 24.2 per 1,000 women in that age group. This is a 9.0 percent drop from 2013. Children of teenage moms are more likely to have lower school achievement and higher dropout rates, more health problems, higher risk of incarceration, give birth as a teen and face unemployment as a young adult.[10]

Health outcomes associated with older infants and long-term development include Sudden Unexpected Infant Death Syndrome (SUIDS) and whether or not the mother breastfeeds. SUIDS accounts for roughly 3,500 deaths in infants less than one year of age in the U.S. SUIDS includes SIDS (sudden death of an infant under one year of age that cannot be explained), unknown causes that don't fit the definition for SIDS, and accidental suffocation and strangulation in bed.[11] Breastfeeding has recently received attention due to its association with the healthy development of the infant. The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life followed by breastfeeding with complementary foods for up to two years or beyond. Breast milk has been associated with reduced child mortality due to diarrhea and pneumonia and helps infants heal quicker. It promotes sensory and cognitive development, protects against infectious and chronic disease, and reduces the risk of ovarian and breast cancer in the mother.[12] The Surgeon General's 2011 Call to Action outlined the risks of exclusive formula use, including the risk of hospitalization due to lower respiratory tract diseases is over 250.0 percent among infants formula fed rather than breastfed and SIDS prevalence is also 56.0 percent higher in infants that had never been breastfed.[13]

As is the case with many other health outcomes, maternal and infant health measures vary across races. Black women are disproportionately burdened with higher risk of many adverse pregnancy-related health outcomes including infant and maternal mortality. These disparities, as well as overall measures of maternal and infant health at the county level, are outlined in more detail in the following sections.

Prenatal and Neonatal Measures of Maternal and Infant Health

Maternal Mortality

Approximately 1,200 women in U.S. die each year from pregnancy related complications.[14] The maternal mortality rate had declined significantly from the 1930s to a low in the late 1980s (6.6 deaths per 100,000 live births). However, the rate has increased again in 2013 where there were 25.9 maternal deaths per 100,000 live births. Some of this rise may be due to improved surveillance, but risk factors, (e.g. increases in hypertension, diabetes, and heart disease) may also influence this increase. In the U.S., Black women have a maternal mortality rate more than two and a half times greater than that for white women, a disparity that has persisted since the 1940s. There is a similarly large disparity in the rates among Black and white women in Maryland (Figure 1). In 2013, a total of two women in Montgomery County and three women in Prince George's County died of pregnancy-related/-associated reasons.[15]

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[10] CDC – Division of Reproductive Health and National Center for Chronic Disease. (2016). About teen pregnancy. Retrieved from: http://www.cdc.gov/teenpregnancy/about/index.htm

[11] CDC – Division of Reproductive Health and National Center for Chronic Disease. (2016). About SUIDS and SIDS. Retrieved from: http://www.cdc.gov/sids/aboutsuidandsids.htm

[12] World Health Organization (WHO). (2016). "Maternal, newborn, child and adolescent health: Breastfeeding. Retrieved from: http://www.who.int/maternal_child_adolescent/topics/child/nutrition/breastfeeding/en/

[13] Office of the Surgeon General (US), & CDC. (2011). The surgeon general's call to action to support breastfeeding - NCBI bookshelf. Retrieved from: https://www.ncbi.nlm.nih.gov/books/NBK52682/

[14] Agrawal, P. (2015). Maternal mortality and morbidity in the United States of America. *Bulletin of the World Health Organization, 93*(3), 133-208. http://dx.doi.org/10.2471/BLT.14.148627

[15] Maryland Department of Health and Mental Hygiene (DHMH): Prevention and Health Promotion Administration. Maryland Maternal Mortality Review: 2014 Annual Report. Baltimore, MD; 2015. http://phpa.dhmh.maryland.gov/mch/Documents/MMR_2014_FINAL_Approved_1-8-15.pdf

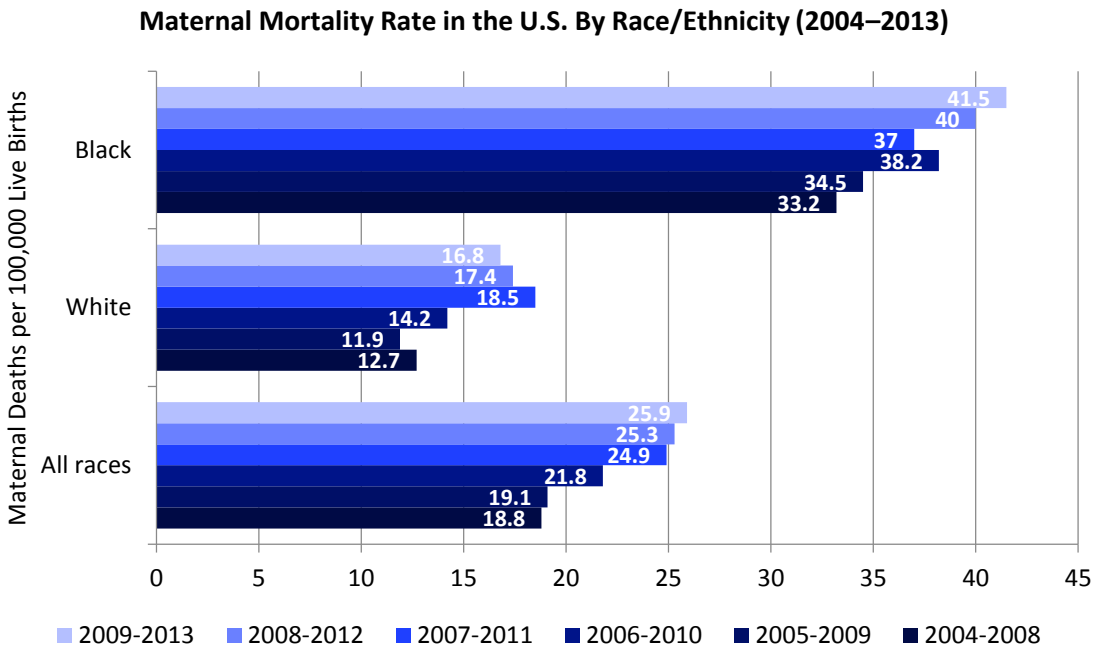


Figure 1. Maternal Mortality Rate in the United States by Race, 2004–2012.
(Source: Maryland Department of Health and Mental Hygiene (DHMH), 2015)

Infant Mortality

In Maryland, the leading cause of death in the first year of life in 2012 was prematurity and low birthweight with 27.7 percent of all infant deaths being due to these risk factors. For neonates, prematurity and low birthweight accounted for 36.0 percent of deaths that year. After the first month of life, SIDS was the leading cause of infant death responsible for 37.0 percent of all infant deaths. Despite recent decreases in infant mortality, Blacks have consistently higher rates of infant mortality than other groups. In 2015, Black infants died almost three times as often as white infants in Maryland.[16]

In 2014, the overall infant mortality rate in Montgomery County was 4.8 deaths per 1,000 live births and has been fairly consistent since 2009 (Figure 2). This rate also meets the HP 2020 and SHIP 2017 targets for infant mortality. For Prince George's County, the overall infant mortality rate was 6.9 deaths per 1,000 live births but there has been a decreasing trend in infant mortality since 2009. Despite this trend, rates still exceed the HP 2020 and SHIP 2017 targets. When infant mortality is broken down by race, Hispanic and Black populations have higher rates of infant mortality than white infants and do not meet either target in either county (Figure 3).

[16]Hogan, L., Rutherford, B., Mitchell, V., & Horon, I. (2016). Maryland vital statistics: Infant mortality in Maryland, 2015. *Maryland Vital Statistics*.

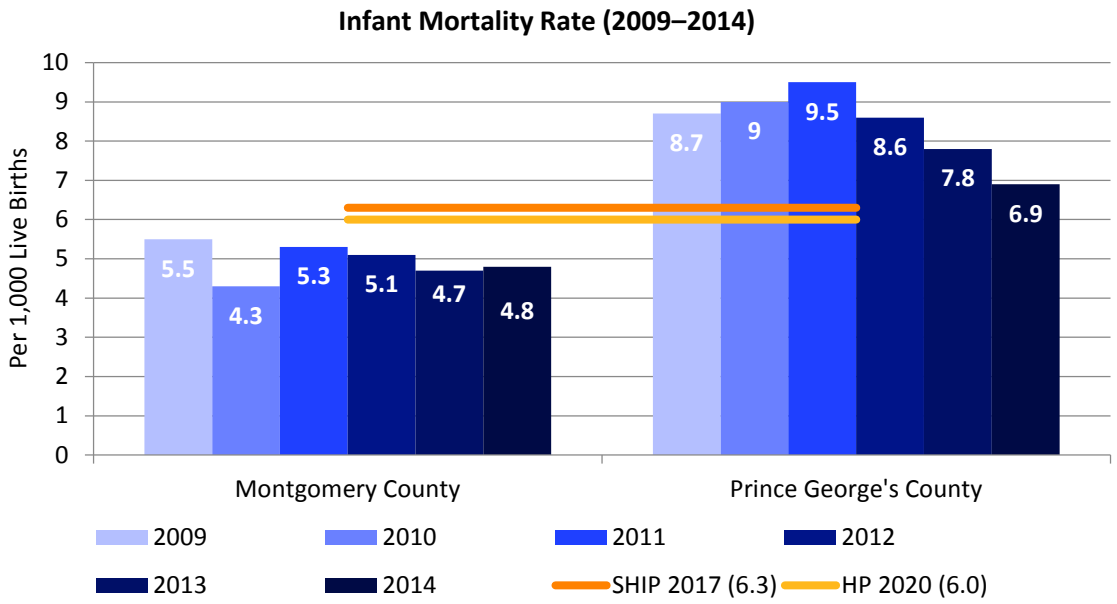


Figure 2. Infant Mortality Rate, 2009–2014.
(Source: DHMH, 2014)

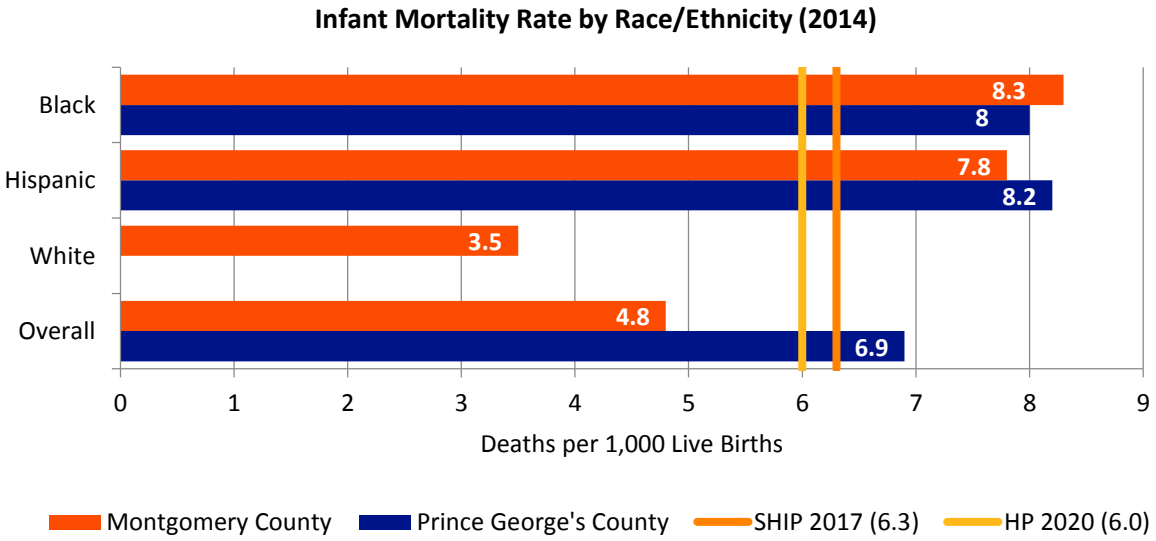


Figure 3. Infant Mortality Rate by Race, 2014. White data missing possibly due to very small sample
(Source: DHMH, 2014)

Preterm Births

Prince George's County has met the HP 2020 target for percent of births as preterm from 2009–2013 and continues to trend in a favorable direction. However, disparities exist with Black women not meeting the HP 2020 target with 11.8 percent of births being preterm (Figure 4). In addition, women over the age of 35 do not meet the HP 2020 target (Figure 6).

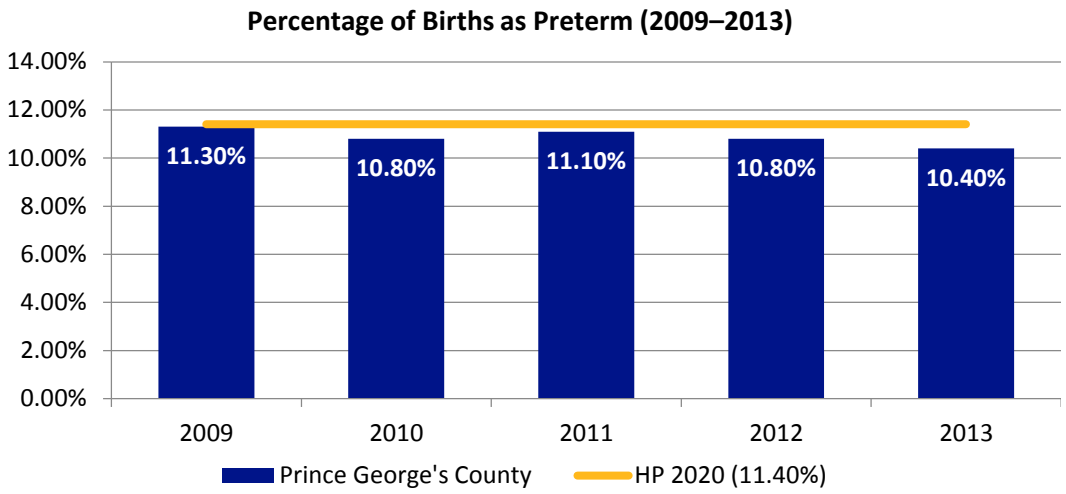


Figure 4. Percentage of Preterm Births, 2009–2013.
(Source: DHMH, 2014)

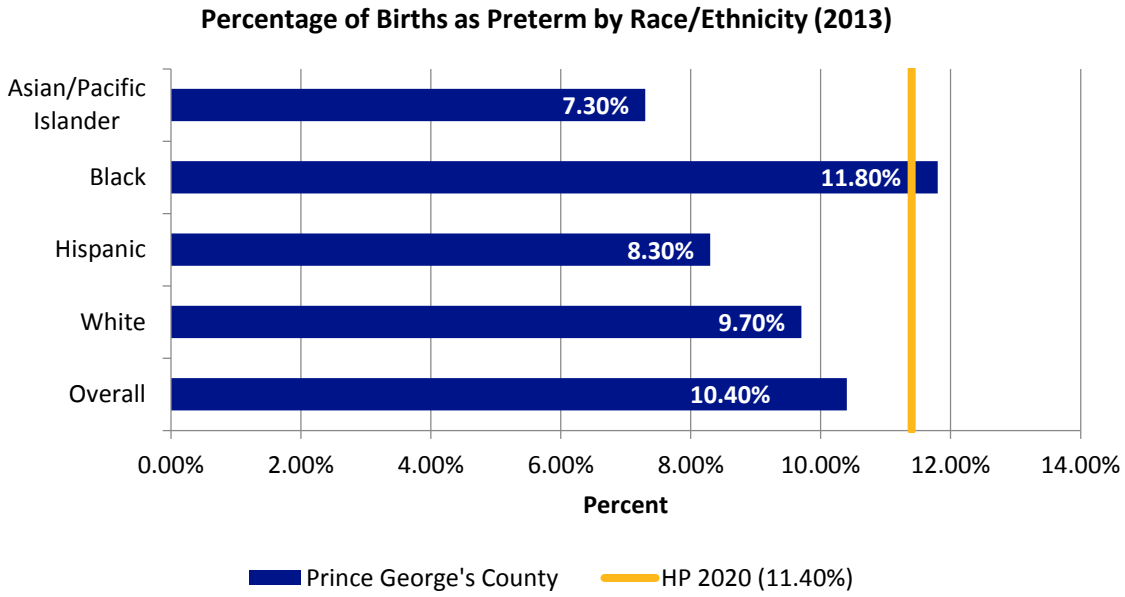


Figure 5. Percentage of Preterm Births, 2013.
(Source: DHMH, 2014)

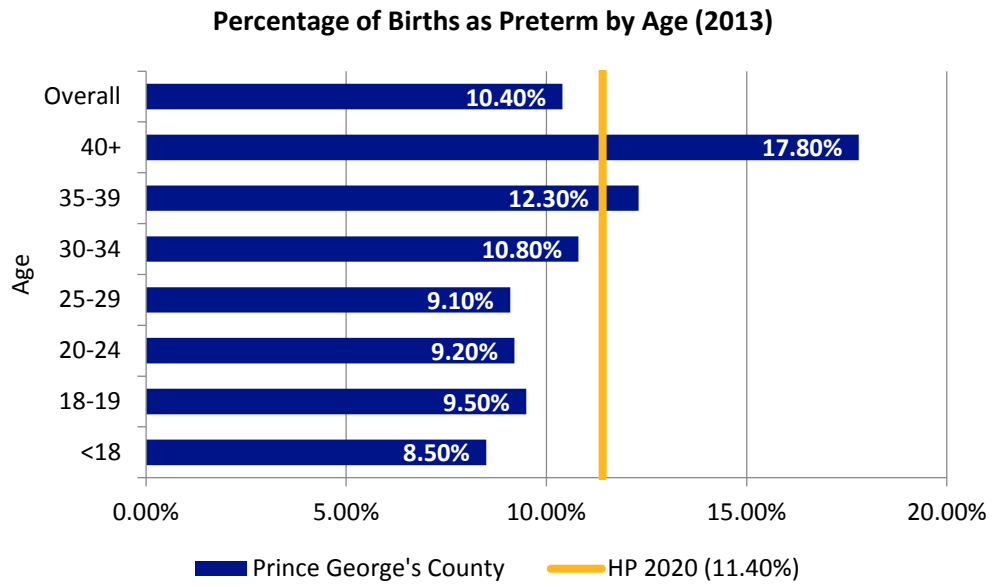


Figure 6. Percentage of Preterm Births, 2013.
(Source: DHMH, 2014)

Low/Very Low Birthweight

In 2014, Montgomery County continued to meet the HP 2020 and SHIP 2017 goals for percentage of infants born with low and very low birthweight. Similarly in 2014, 7.7 percent of infants were born with low birthweight (Figure 7) and 1.3 percent were born with very low birthweight (Figure 8). Prince George's County did not meet either target in 2014 with 9.2 percent of infants being born with low birthweight and 2.0 percent of infants being born with very low birth weight. However, there appears to be a decreasing trend in prevalence of low birthweight infants from 2009–2014 in the county.

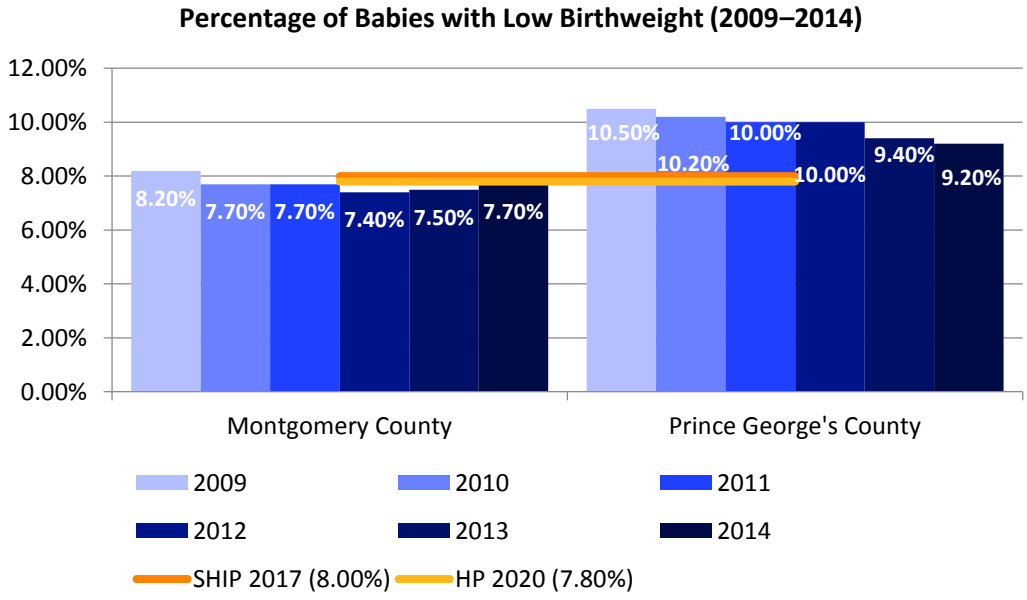


Figure 7. Percentage of Babies with Low Birthweight, 2009–2014
(Source: DHMH, 2014)

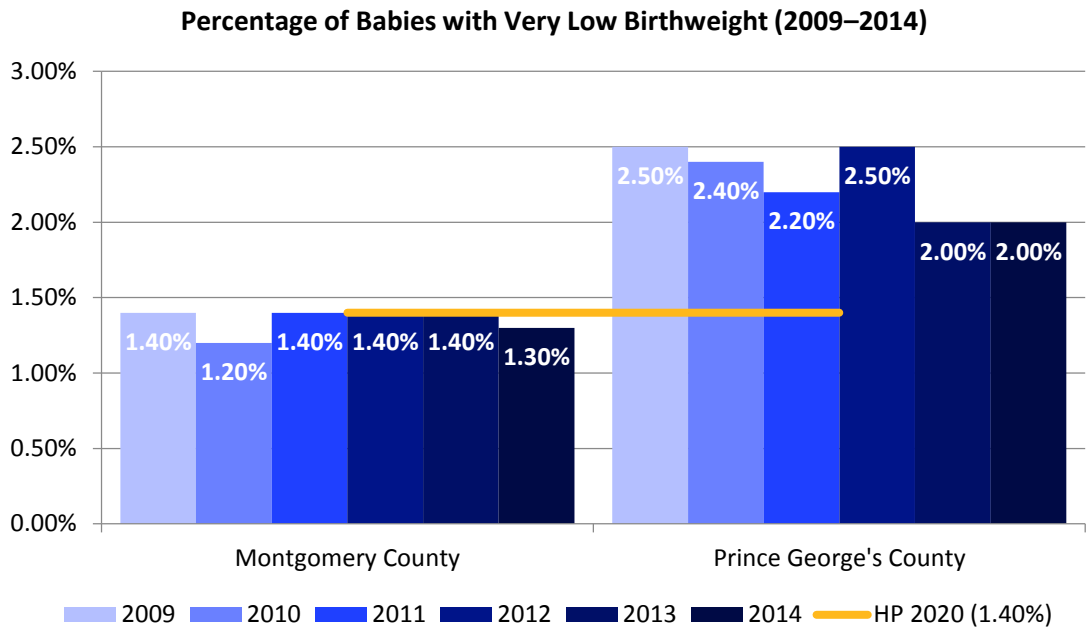


Figure 8. Percentage of Babies with Very Low Birthweight, 2009–2014
(Source: DHMH, 2014)

When looking at birthweight by race it is clear that disparities exist across both counties. White infants have the lowest prevalence of low birthweight (Montgomery County: 5.8 percent and Prince George's County: 5.3 percent) and very low birthweight (Montgomery County: 0.8 percent and Prince George's County at 0.7 percent) across both counties while Black infants have the highest prevalence for both measures across both counties, and far exceed the SHIP 2017 and HP 2020 targets (Figure 9 and Figure 10).

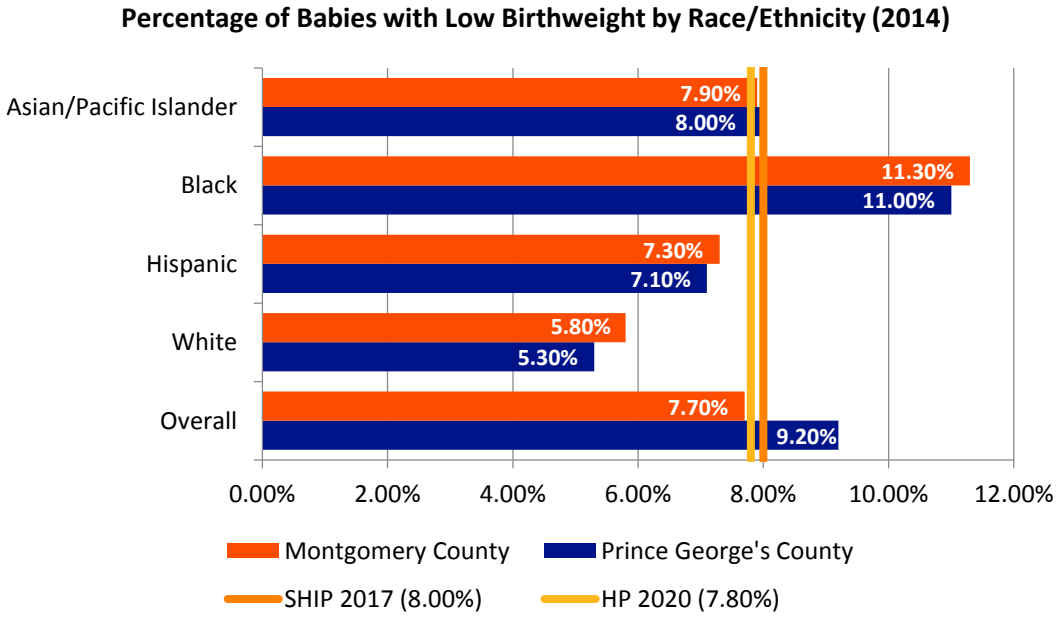


Figure 9. Percentage of Babies with Low Birthweight by Race/Ethnicity, 2014
(Source: DHMH, 2014)

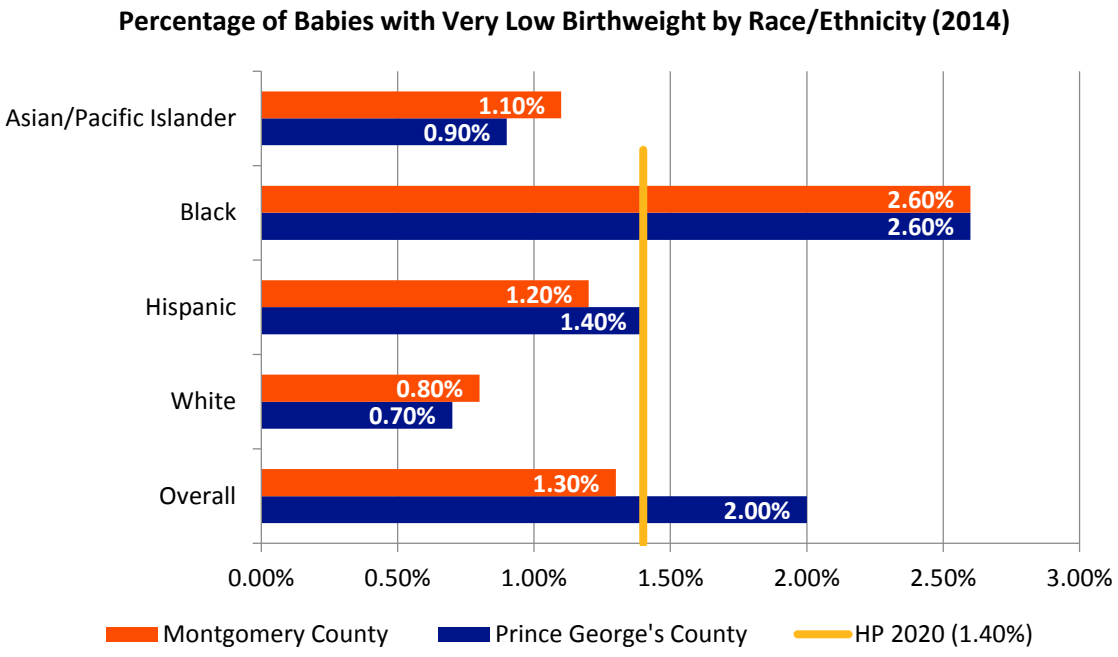


Figure 10. Percent of Babies with Very Low Birthweight by Race/Ethnicity, 2014
(Source: DHMH, 2014)

Age also appears to play a role in the prevalence of low and very low birthweight babies for both counties. In Montgomery County, the ages with the highest prevalence of low birthweight includ the youngest and oldest age groups(Figure 11) while very low birthweight appears to have similar prevalence across all age groups with a slightly higher number for mothers over 40 years of age (Figure 12). For Prince George's County, low birthweight is associated with the youngest and oldest age groups while for very low birthweight, the highest prevalence by far was in mothers over 40 years of age (13.1 percent) and appears to be positively associated with age.

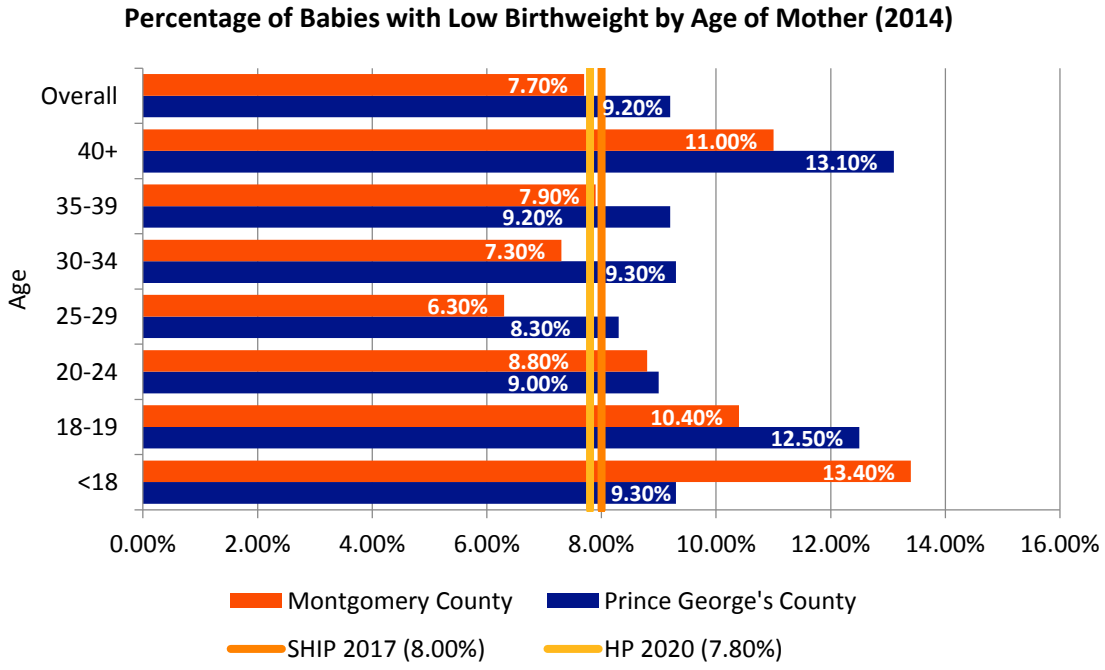


Figure 11. Percentage of Babies with Low Birthweight, By Age of Mother, 2014
(Source: DHMH, 2014)

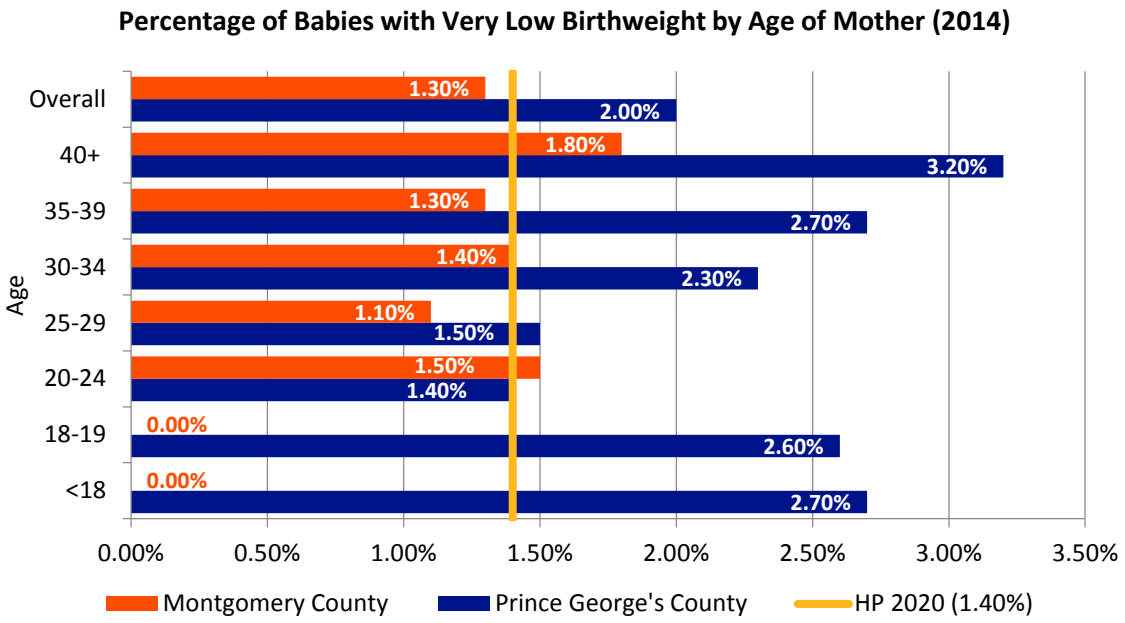


Figure 12. Percentage of Babies with Very Low Birthweight, By Age of Mother, 2014
(Source: DHMH, 2014)

Receipt of Prenatal Care

While the percentage of mothers receiving prenatal care appears to be trending in a positive direction in Montgomery (64.5 percent) and Prince George's Counties (51.2 percent), neither counties met the HP 2020 or SHIP 2017 targets in 2014 (Figure 13).

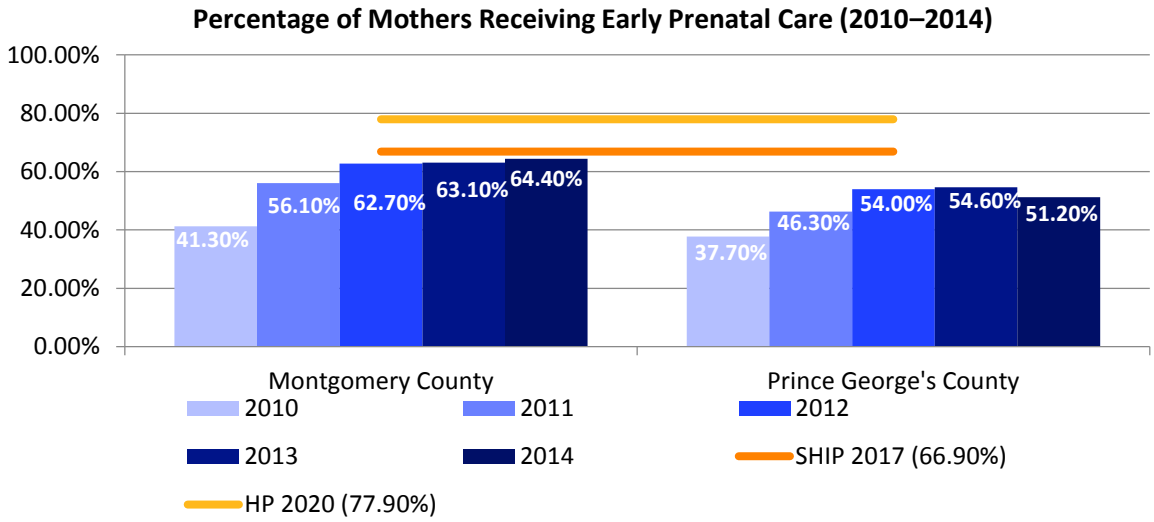


Figure 13. Percentage of Mothers Receiving Early Prenatal Care, 2010–2014
(Source: DHMH, 2014)

Disparities exist across races for both counties. In Montgomery County, 80.1 percent of white women and 71.7 percent of Asian/Pacific Islander women receive care while only 52.8 percent of Black women and 47.4 percent of Hispanic women receive early prenatal care. The county does not meet either the HP 2020 or SHIP 2017 targets. Only white women meet both targets in the county (Figure 14). This trend across races is similar in Prince George's County with white women most likely to receive prenatal care and Black and Hispanic women the least likely to receive early care. Nevertheless, not one race/ethnicity group meets either target.

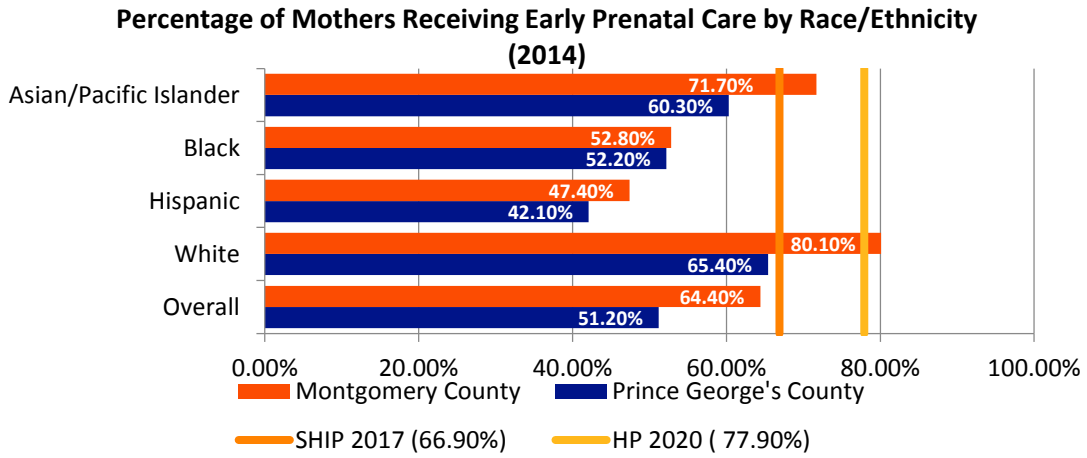


Figure 14. Percentage of Mothers Receiving Early Prenatal Care by Race/Ethnicity, 2014
(Source: DHMH, 2014)

Disparities also exist across different mother age groups in both counties. Women are more likely to receive prenatal care as they get older. In Montgomery County, only 21.4 percent of women less than 18 years of age receive early care while 70.9 percent of women 35–39 years of age receive early care (Figure 15). Prince George's county displays a similar trend for women receiving early prenatal care across age groups. Nevertheless, no age group of women met the HP 2020 target and only women 30–39 years of age in Montgomery County met the SHIP 2017 target for receiving early prenatal care.

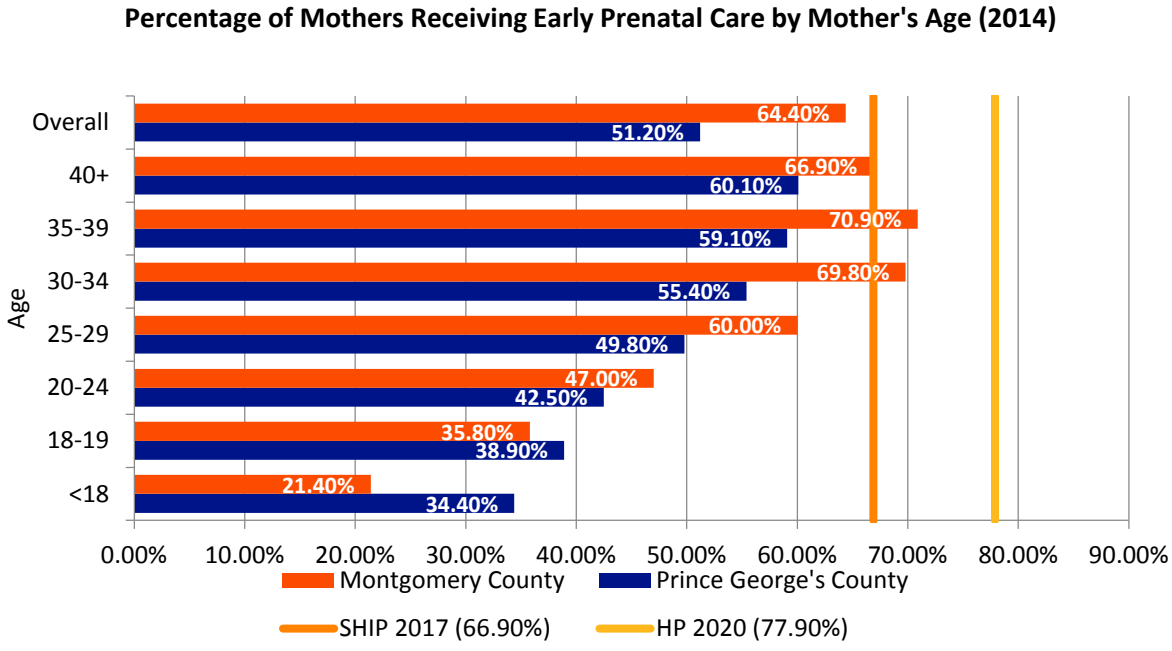


Figure 15. Percentage of Mothers Receiving Early Prenatal Care by Mother Age, 2014
(Source: DHMH, 2014)

Teen Pregnancy

The teen birth rate has been on a steady decline in Montgomery and Prince George's Counties from 2009–2014. In Montgomery County, the SHIP 2017 target was met in 2010 and has continued to decrease since then. The teen pregnancy rate in Prince George's County has decreased dramatically from 35.4 live births per 1,000 females aged 15–19 in 2009 to 21.3 live births for the same group in 2014 (Figure 16). Racial disparities exist for both counties. In Montgomery County, all racial/ethnic groups met the SHIP 2017 target in 2014 except for Hispanics. In Prince George's County, neither Hispanic nor Black teens met the SHIP 2017 target (Figure 17).

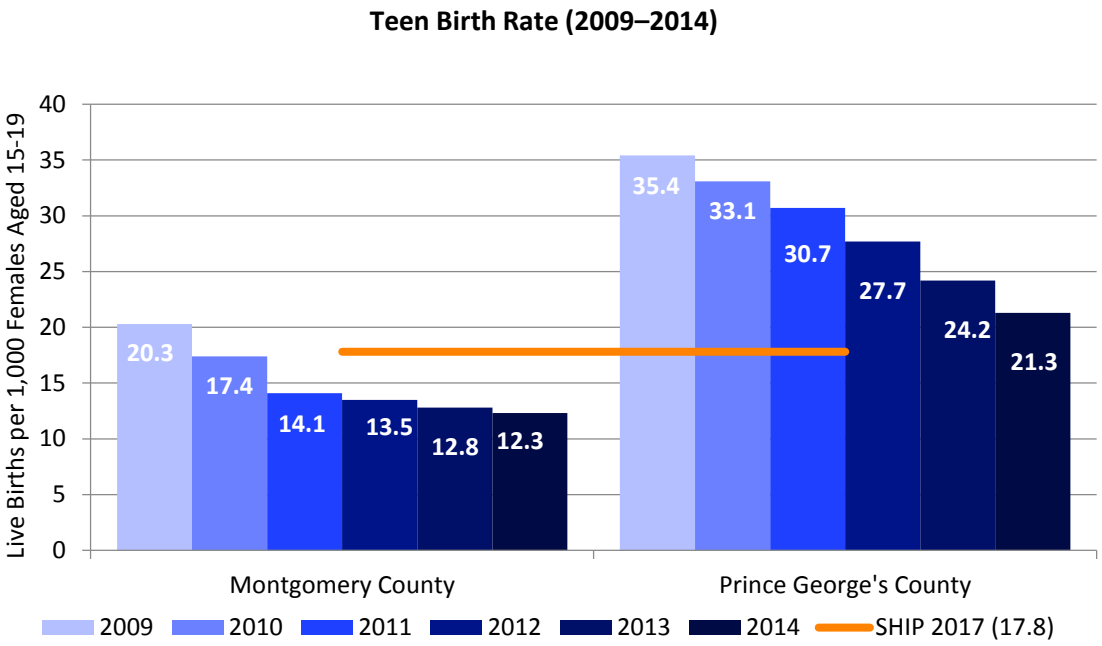


Figure 16. Teen Birth Rate, 2009–2014
(Source: DHMH, 2014)

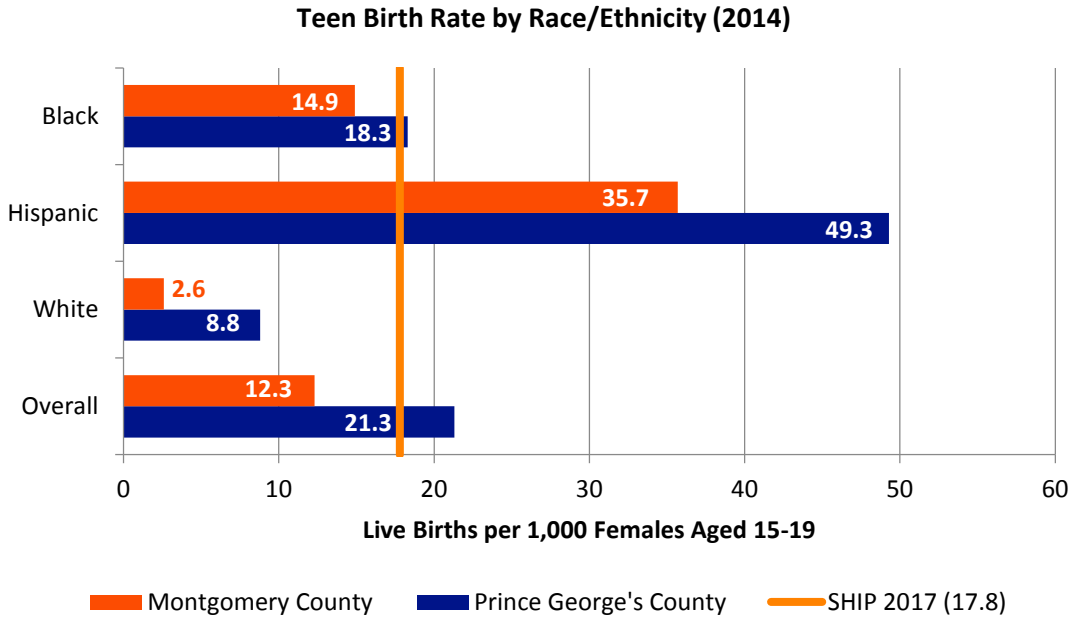


Figure 17. Teen Birth Rate by Race, 2014
(Source: DHMH, 2014)

Antenatal Measures of Infant Health

Sudden Unexpected Infant Death

Montgomery County has met the SHIP 2017 target for infant deaths per 1,000 live births during the period of 2006–2013. Prince George's County has exceeded the target for SHIP 2017 for this same time period and the trend appears to be increasing (Figure 18).

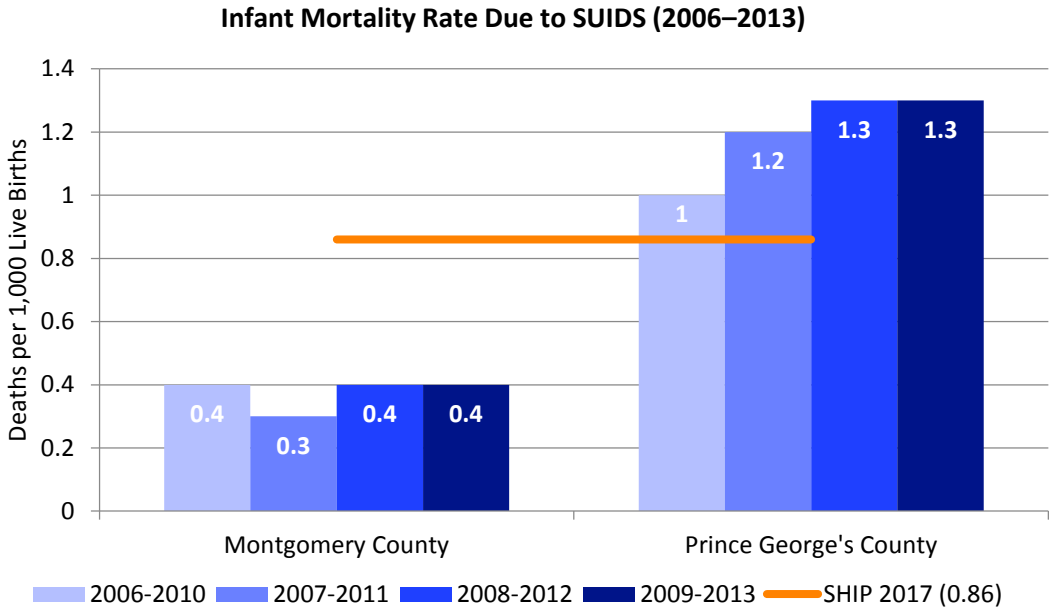


Figure 18. Teen Birth Rate by Race, 2006–2013
(Source: DHMH - Maryland State Health Improvement Process (SHIP), 2014)

Breastfeeding

The percentage of women engaging in breastfeeding practices in Maryland appears to be increasing. In 2009, 75.3 percent of women reported ever breastfeeding their infant and 16.0 percent reported exclusively breastfeeding through 6 months of age. In 2012, those percentages increased to 82.2 percent and 26.6 percent, respectively.[17] For women in the WIC program in 2012, 9.9 percent reported fully breastfeeding and 23.1 percent reported partially breastfeeding. In Montgomery County, 10.2 percent of mothers reported fully breastfeeding and another 48.8 percent reported partially breastfeeding. Prince George's County's mothers reported 7.8 percent fully breastfeeding and 30.9 percent partially breastfeeding (Figure 19).

Nationally, breastfeeding practices varied by race in 2012. Roughly 83.0 percent of Hispanic, white, and Asian women reported ever breastfeeding while only 66.4 percent of Black women reported ever breastfeeding (Figure 20).

[17] CDC – Division of Nutrition, Physical Activity and Obesity. (2012). Nutrition, physical activity and obesity: data, trends and maps. Retrieved from: https://nccd.cdc.gov/NPAO_DTM/

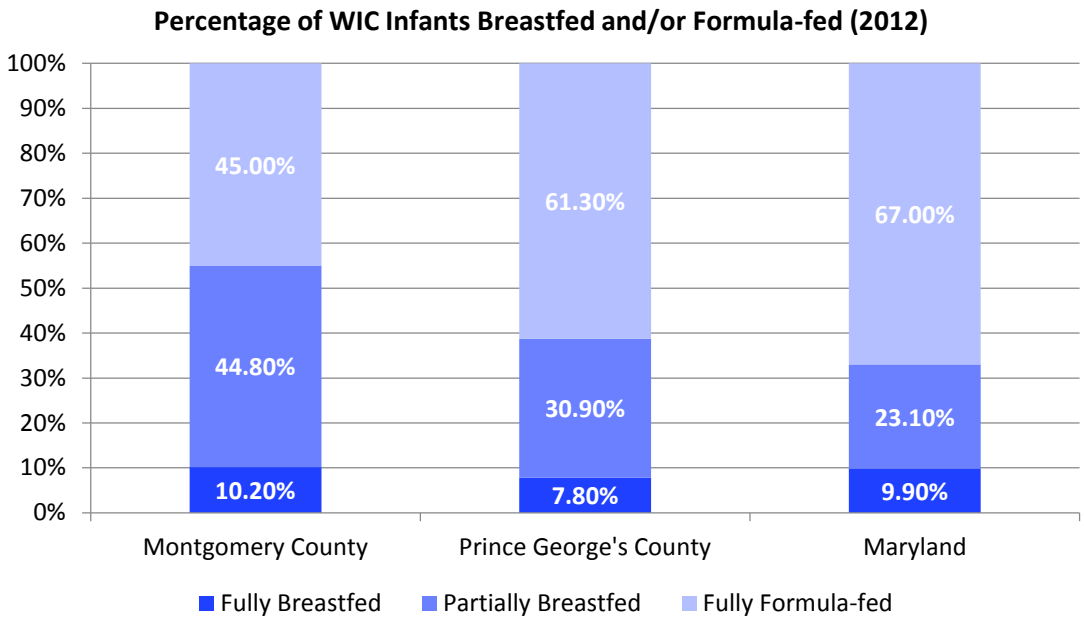


Figure 19. Percent of WIC Infants Breastfed and/or Formula-fed, 2012
(Source: CDC, 2012)

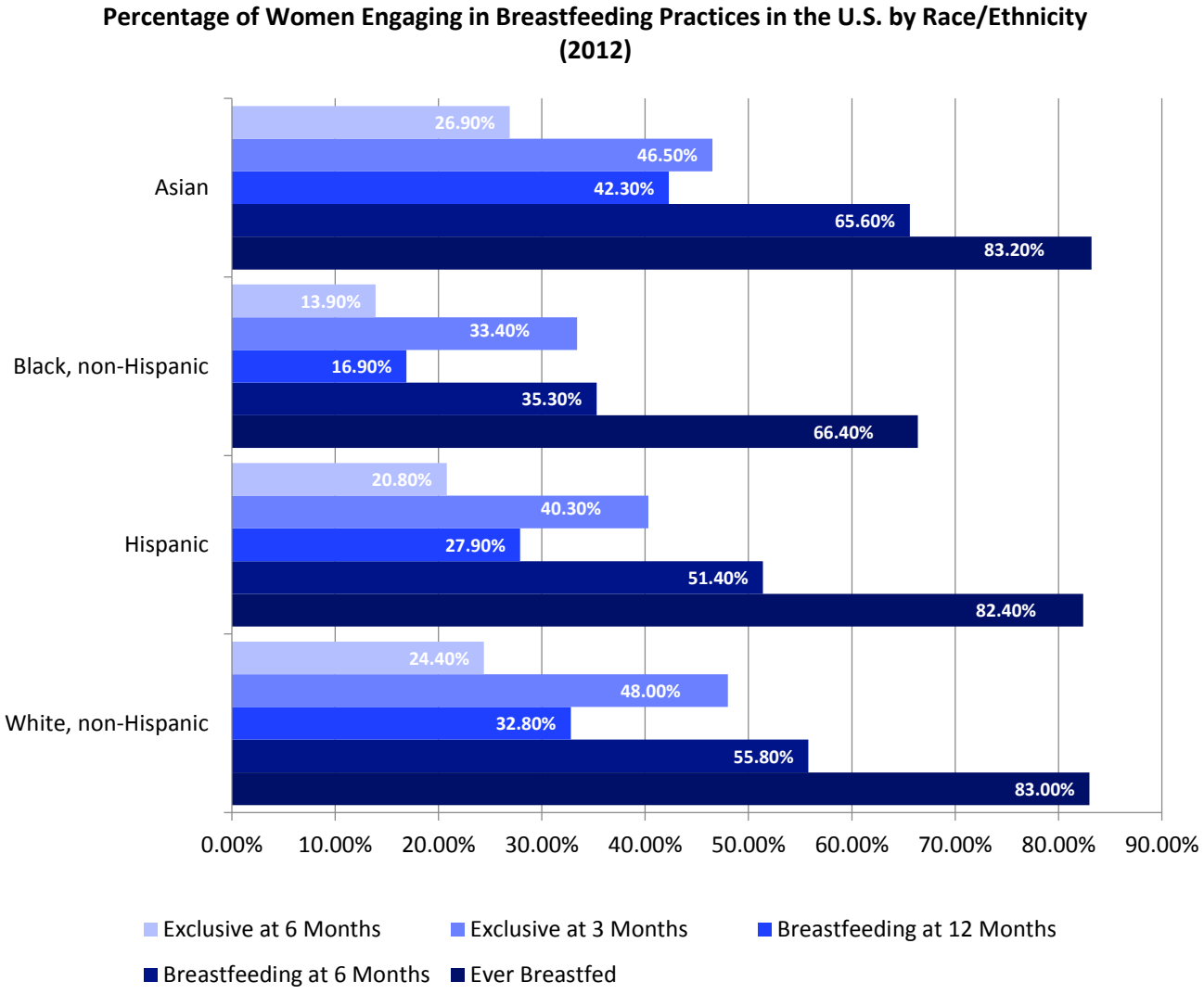


Figure 20. Percent of Women Engaging in Breastfeeding Practices in the United States by Race, 2012
(Source: CDC, 2012)

Community Resources

Services and resources are available for maternal and infant health needs in Washington Adventist Hospital's Community Benefit Service Area. Services range from pregnancy testing, to prenatal care, delivery, and post-partum care as well as care for infants. Both Prince George's and Montgomery Counties have numerous programs and efforts to improve maternal and infant health and access to care. Services include, but are not limited to, the following:

- Washington Adventist Hospital provides a full range of services in addition to their Women's and Infant's Center. WAH offers a wide range of parent education programs including childbirth classes, breastfeeding classes, others. Support groups and lactation consultation is also available. The hospital also works closely with Mary's Center clinic, assisting them with clinical and educational programs.
- Dimensions Healthcare (Prince George's Hospital and Laurel Regional Hospital) provides prenatal, delivery, and newborn care as well as classes.
- Holy Cross Hospital provides a full service birthing unit, which includes classes, new born care, and education.
- Prince George's County Health Department's Maternal and Child Health Division provides many services and programs, including: case management, health screenings, a Healthy Women/Healthy Lives program to ensure optimal health status prior to pregnancy, the Infants and Toddlers program, an Infant-At-Risk program and the Women's Infants, and Children (WIC) program, a Teen Pregnancy Program, and the African American Outreach Program's S.M.I.L.E. program.
- The Family Support Center, in Prince George's County, provides support groups, service coordination, and referral services.
- The Pregnancy Aid Center, in Prince George's County, assists low-income women, adolescents, and newborns.
- Bright Beginnings, in Prince George's County, offers free pregnancy testing, wellness services, and case management.
- Prince George's Child Resource Center, Inc. offers a variety of programs for mothers, families and children. The Adelphi/Langley Park Family Support Center offers a free transportation and child care to children aged 0-4 while improving the language and cognitive abilities of the children. The PG Child Resource Center also offers a Healthy Families Prince George's program that focuses on healthy, positive parent-child interaction as well as early childhood mental health programs.
- Montgomery County Health Department offers the following services: prenatal care, routine lab tests, classes and dental screening. The Health Department also provides case management services, which includes on-site and in-home Community Health Nurse Case Management services to uninsured pregnant women and children up to age two. The Infant Mortality Prevention and Intervention program of Montgomery County includes the African American Health Program's S.M.I.L.E. program, which provides case management, home visitation, referrals, education and support. There is a Teen Pregnancy and Teen Parent Support program.

Section IV: Findings

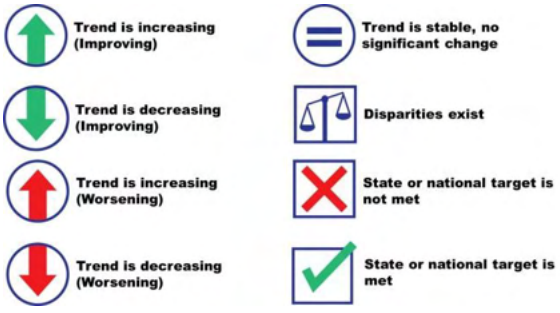
Part B:
Secondary Data Findings

Chapter 6: Behavioral Health

Behavioral Health

KEY FINDINGS

- As of 2013, an estimated 10.7 percent of Montgomery County youths aged 12-17 years have had a major depressive episode.
- The suicide rate in Montgomery County (7 per 100,000) and Prince George's County (5.7 per 100,000) has been steady since 2008.
- Both Montgomery County and Prince George's County meet the SHIP 2017 and HP 2020 targets for suicide rates.
- Across racial groups, whites are the most disproportionately burdened group by suicide in both Montgomery and Prince George's Counties.
- The state of Maryland and Montgomery County met the SHIP 2017 target of 199.4 per 100,000 for ER visits related to Alzheimer's and other dementia.
- Prince George's County did not meet the SHIP 2017 target for ER visits related to Alzheimer's or other dementia.
- Black Montgomery County residents had the highest ER utilization rates for illnesses related to mental health, substance abuse, and Alzheimer's or other dementias. In Prince George's County, Blacks had the highest ER utilization rate for illnesses related to Alzheimer's or other dementia, whereas whites had the highest ER rates for illnesses related to mental health or substance abuse.
- The adult smoking rate is higher in Prince George's County than Montgomery County. Blacks in Montgomery County and whites in Prince George's County have the highest smoking rate compared to their respective racial counterparts.
- The drug-induced death rate is highest among whites in Montgomery County, Prince George's County and Maryland.
- A survey of Montgomery County adolescents in grades 9 to 12 found a significant decrease in the rate of adolescent tobacco users from 19.2 percent in 2010 to 12.1 percent in 2013, which has helped the County meet the SHIP 2017 target of 15.2% adolescent tobacco smokers.
- Of all adults with mental illness, the 18-25 year olds report the highest use of drugs and alcohol. This is especially concerning since 18-25 year olds make up only 13 percent of the mentally ill adult population.



Behavioral Health

Impact

Behavioral health is defined as a state of mental and emotional being and/or choices and actions that affect wellness.[1] Mental health and substance abuse are subsets of behavioral health. Mental health is a crucial area of focus because mental health disorders are the leading cause of disability and years lost to disability in the United States, while suicide is the 10th leading cause of death.[2] Substance abuse is a public health concern as it poses a threat to an individual's, as well as the community's, social, physical, and mental health.[3]

[1] Substance Abuse and Mental Health Services Administration (SAMHSA). (n.d.). Center for the application of prevention technologies: Fact sheet. Retrieved from: http://www.samhsa.gov/capt/sites/default/files/resources/behavioral-health-factsheet.pdf

[2] U.S. Department of Health and Human Services (DHHS). (2016). Mental health and mental disorders: Overview. *Healthy People 2020*. Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/mental-health-and-mental-disorders

[3] DHHS. (2016). Substance abuse: Overview. *Healthy People 2020.* Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse

6.1 Mental Health

Adventist HealthCare Washington Adventist Hospital mainly serves Montgomery and Prince George's Counties. Montgomery County has slightly fewer mentally unhealthy days at an average of 2.7 days per month than Prince George's County at 3.1 poor mental health days per month.[4] This is demonstrated by the self-reported good mental health figures below (Figures 1, 2, and 3). Although both counties have similar overall self-reported good mental health, the rates differ when stratified by race and ethnicity, age, and gender.[5] For example, Asians in Prince George's County and whites in Montgomery County report higher rates of good mental health than their racial counterparts. In terms of age, seniors over the age of 65 years report higher good mental health than the other age groups in both counties. Males in both counties report higher rates of good mental health than females.

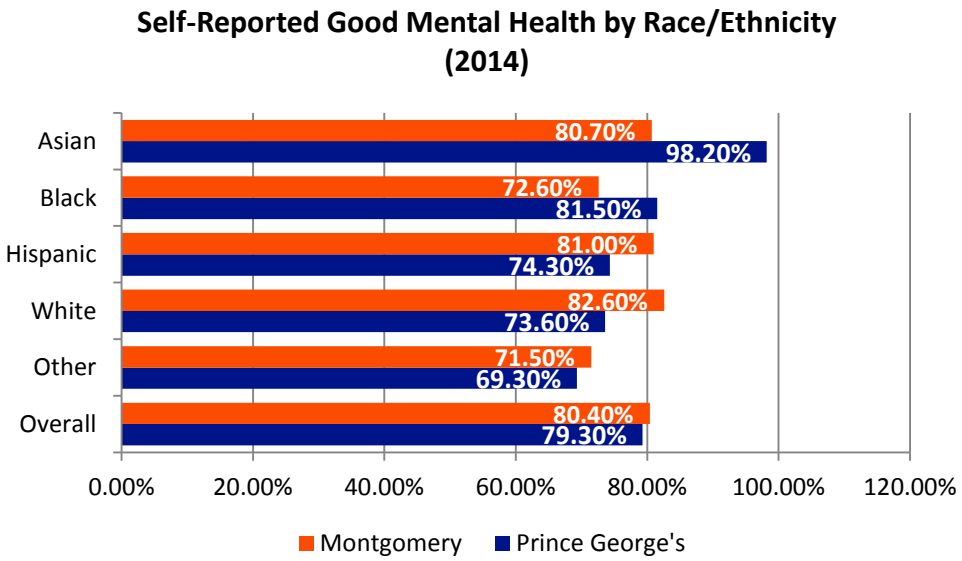


Figure 1. Self-Reported Good Mental Health by Race/Ethnicity in Montgomery and Prince George's Counties
(Sources: Healthy Montgomery and PGC Health Zone, 2014)

[4] University of Wisconsin: Population Health Institute. (2016). Maryland Quality of Life: Poor Mental Health Days in 2014. *County Health Rankings.* Retrieved from: http://www.countyhealthrankings.org/app/maryland/2016/measure/outcomes/42/map
[5] Healthy Communities Institute. (2016). Self-reported good mental health. *Healthy Montgomery.* Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=407&localeId=1259

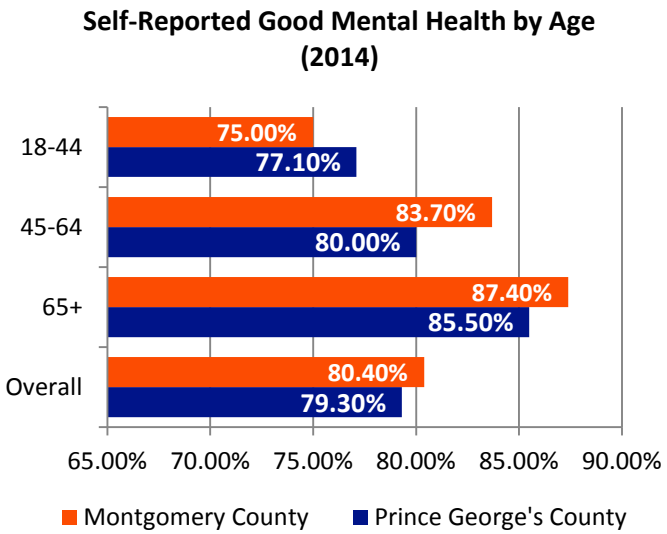


Figure 2. Self-Reported Good Mental Health by Age in Montgomery and Prince George's Counties
(Sources: Healthy Montgomery and PGC Health Zone, 2014)

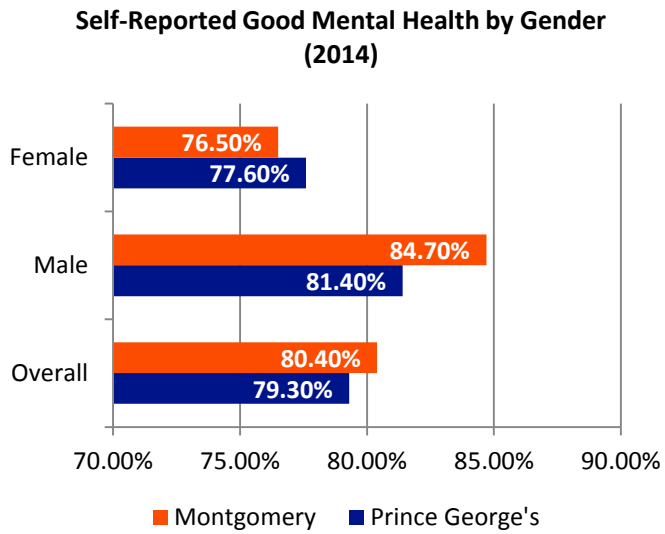


Figure 3. Self-Reported Good Mental Health by Gender in Montgomery and Prince George's Counties
(Sources: Healthy Montgomery and PGC Health Zone,, 2014)

Social and emotional support contribute to one's mental health. Approximately 83 percent of Montgomery County and 79 percent of Prince George's County residents report having adequate social and emotional support (Figures 4 and 5). In Montgomery County, whites report the highest level of support while Latinos report the lowest. In Prince George's County, the reported rate of adequate support is similar between Blacks and Whites.

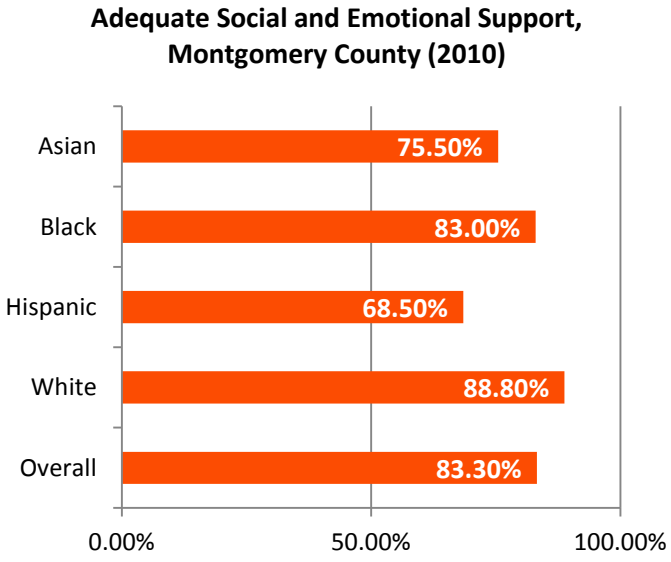


Figure 4. Adequate Social and Emotional Support, Montgomery County
(Source: Healthy Montgomery, 2010)

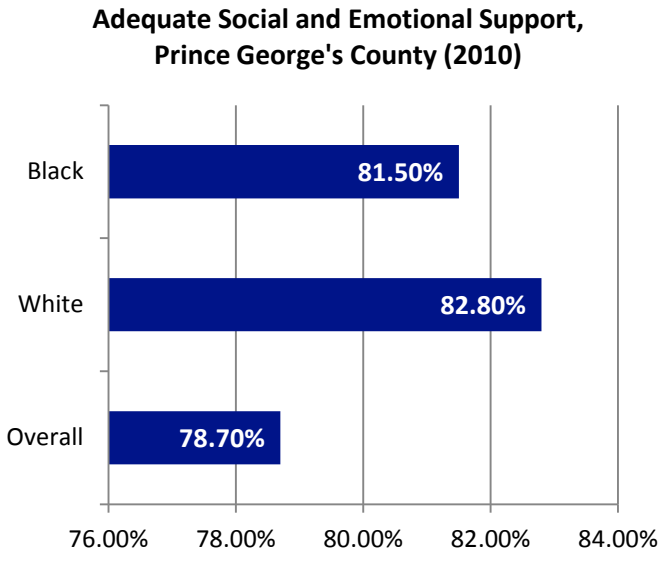


Figure 5. Adequate Social and Emotional Support, Prince George's County
(Source: PGC Health Zone, 2010)

Depression

According to the National Alliance on Mental Illness (NAMI), major depressive disorder is the leading cause of disability among individuals aged 18 to 44 years. In Montgomery County, 14.4 percent of the residents have reported a diagnosis of depression (Figure 6). Of those residents, Hispanics had the highest depression diagnoses, followed closely by Blacks. In keeping with the NAMI statistics, residents aged 18 to 44 years had the highest rate of depression (Figure 7). Females were also diagnosed with depression at a higher rate than males (Figure 8).

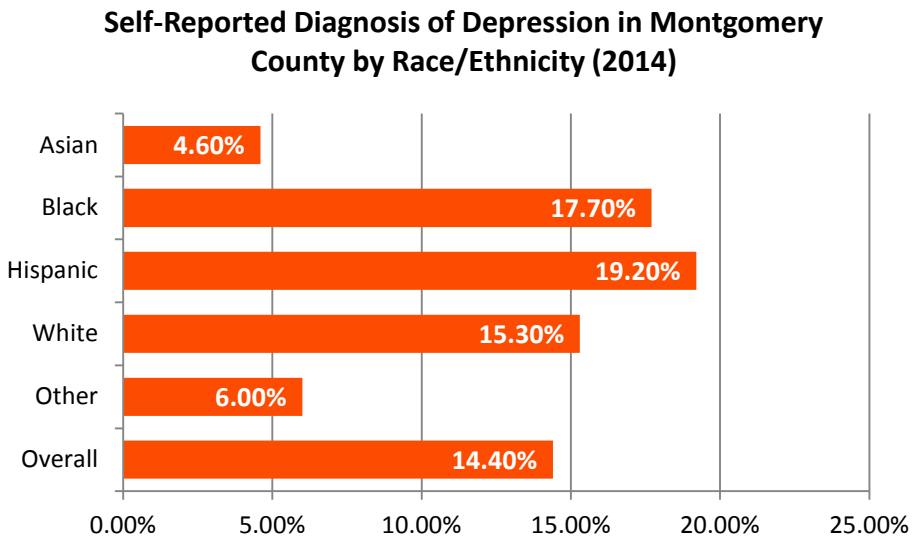


Figure 6. Self-Reported Diagnosis of Depression in Montgomery County by Race/Ethnicity (Source: Healthy Montgomery, 2014)

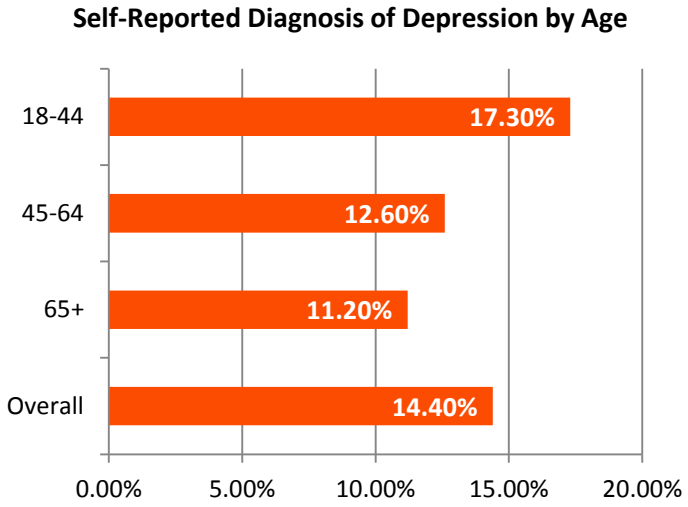


Figure 7. Self-Reported Diagnosis of Depression in Montgomery County by Age (Source: Healthy Montgomery, 2014)

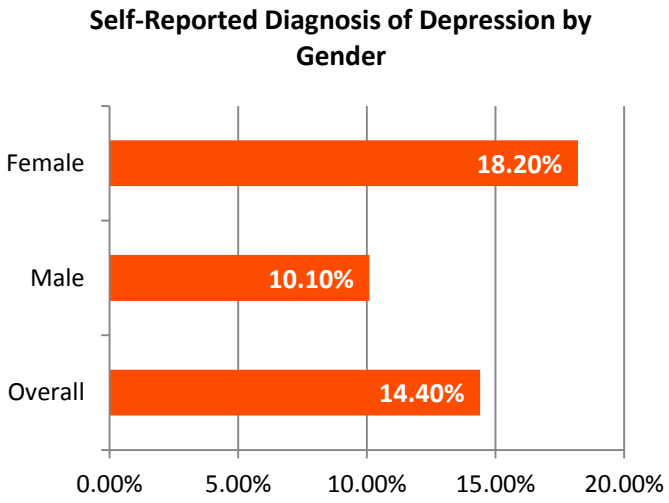


Figure 8. Self-Reported Diagnosis of Depression in Montgomery County by Gender (Source: Healthy Montgomery, 2014)

According to the 2015 report by the Office of Legislative Oversight, an estimated 10.7 percent of Montgomery County youths aged 12 to 17 years had a major depressive episode in 2013.[6] Of those youths, 72 percent suffered severe impairment due to the depressive episode (Figure 9).

[6] Carrizosa, N. & Richards, S. (2015). Behavioral health in Montgomery County; Report number 2015-13. *Office of Legislative Oversight*. Retrieved from: http://www.montgomerycountymd.gov/OLO/Resources/Files/2015_Reports/OLO%20Report%202015-13%20Behavioral%20Health%20in%20Montgomery%20County.pdf

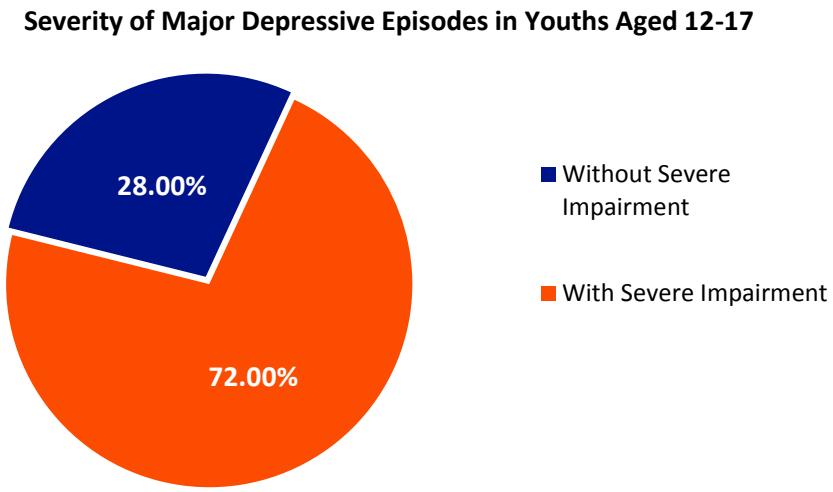


Figure 9. Severity of Major Depressive Episodes in Youths Aged 12-17
(Source: Behavioral Health in Montgomery County, 2013)

The rate of depression among the Medicare population is lower than that of the general population. Figure 10 below shows that the Medicare population in Montgomery has a higher rate of depression than its counterpart in Prince George's county. It is worth noting that the Medicare population under the age of 65 years is more prone to depression than those over the age of 65.[7]

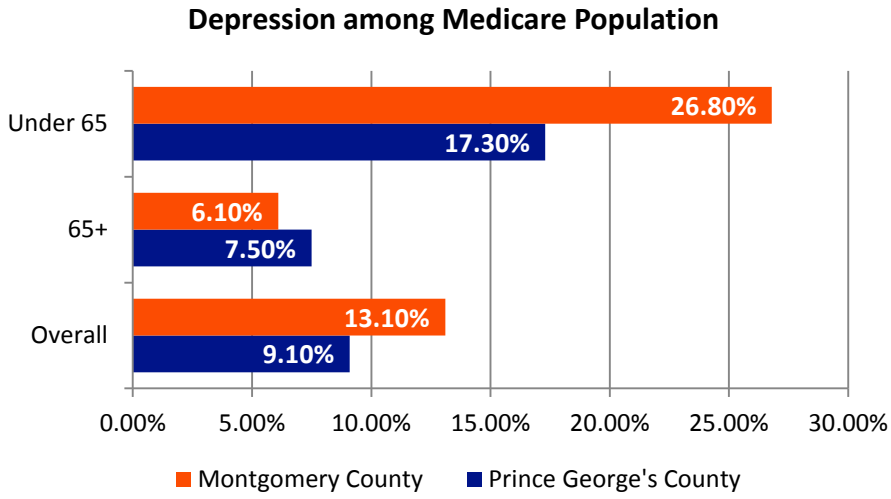


Figure 10. Depression among Medicare Population, 2014
(Source: Healthy Montgomery, 2014)

Anxiety

NAMI has reported that approximately 18 percent of adults have anxiety disorders and most will have experienced their first anxiety episode before the age of 21.[8] While the percentage of the Montgomery County residents with anxiety disorders is lower than the national rate, the different racial groups are affected disproportionately (Figure 11). Whites and Latinos report the highest rates of anxiety disorders. When stratified by age and gender, the 18 to 44 year old population and females are diagnosed with anxiety at higher rates than other age groups or males (Figures 12 and 13).

[7] Carrizosa, N. & Richards, S. (2015). Behavioral health in Montgomery County; Report number 2015-13. *Office of Legislative Oversight*. Retrieved from: http://www.montgomerycountymd.gov/OLO/Resources/Files/2015_Reports/OLO%20Report%202015-13%20Behavioral%20Health%20in%20Montgomery%20County.pdf

[8] National Alliance on Mental Illness (NAMI). (2016). Anxiety disorders: Overview. Retrieved from: https://www.nami.org/Learn-More/Mental-Health-Conditions/Anxiety-Disorders

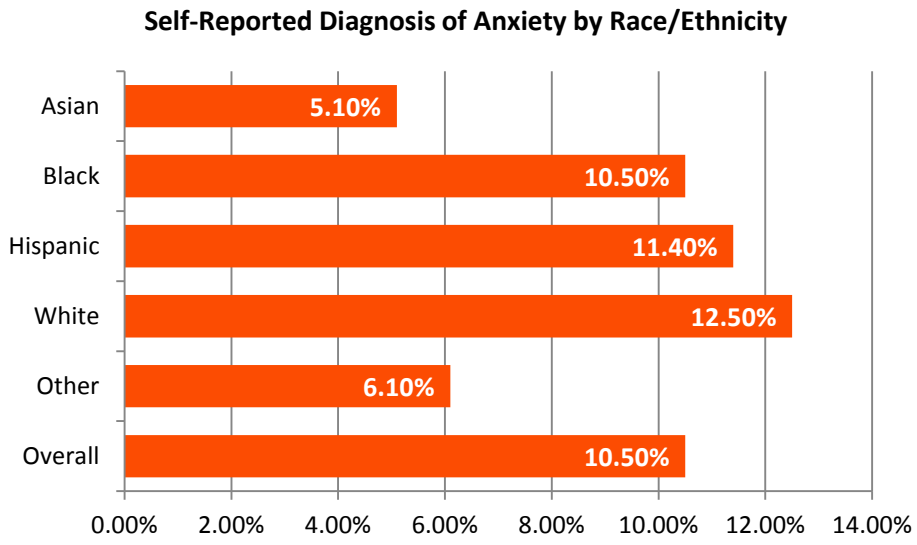


Figure 11. Self-Reported Diagnosis of Anxiety by Race/Ethnicity, Montgomery County
(Source: Healthy Montgomery, 2014)

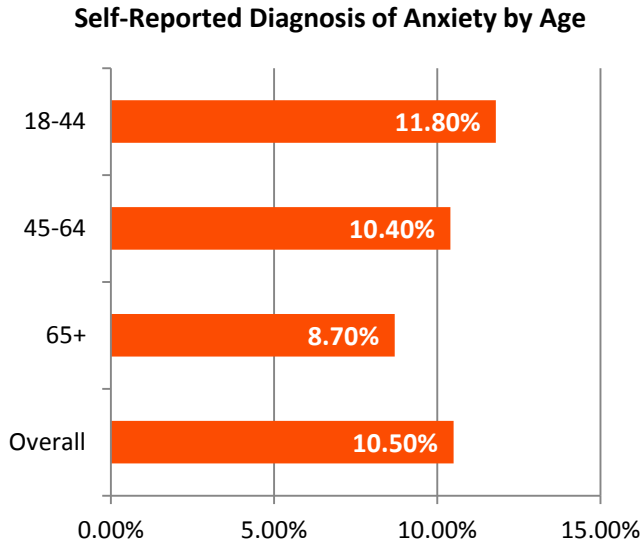


Figure 12. Self-Reported Diagnosis of Anxiety in Montgomery County by Age
(Source: Healthy Montgomery, 2014)

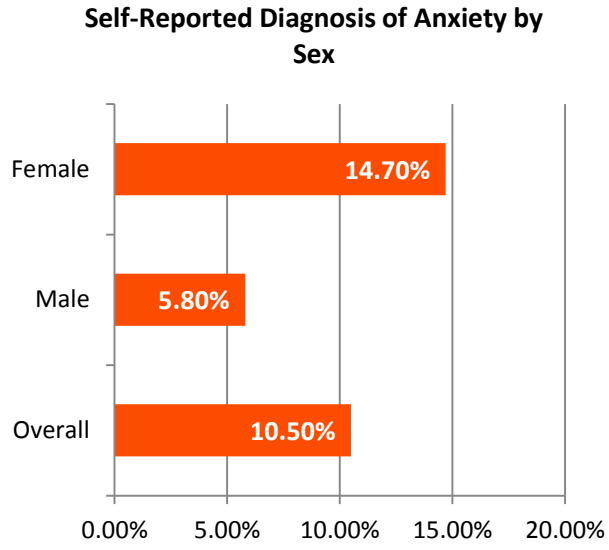


Figure 13. Self-Reported Diagnosis of Anxiety in Montgomery County by Sex
(Source: Healthy Montgomery, 2014)

Suicide

Suicide is the 10th leading cause of death for all ages and the second leading cause of death for ages 10–34 years old.[9] In the state of Maryland, suicide rate has been slightly increasing since 2008. However, in both Montgomery and Prince George's Counties, the suicide rate has been steady for the last three measuring periods (Figure 14). Both counties meet the SHIP target of 9 suicides per 100,000 and Healthy People 2020 target of 10.2.

[9] Center for Disease Control and Prevention (CDC), National Vital Statistics System, & National Center on Health Statistics (NCHS). (2014). 10 Leading Causes of Death by Age Group, United States – 2014. Retrieved from: http://www.cdc.gov/injury/images/lc-charts/leading_causes_of_death_age_group_2014_1050w760h.gif

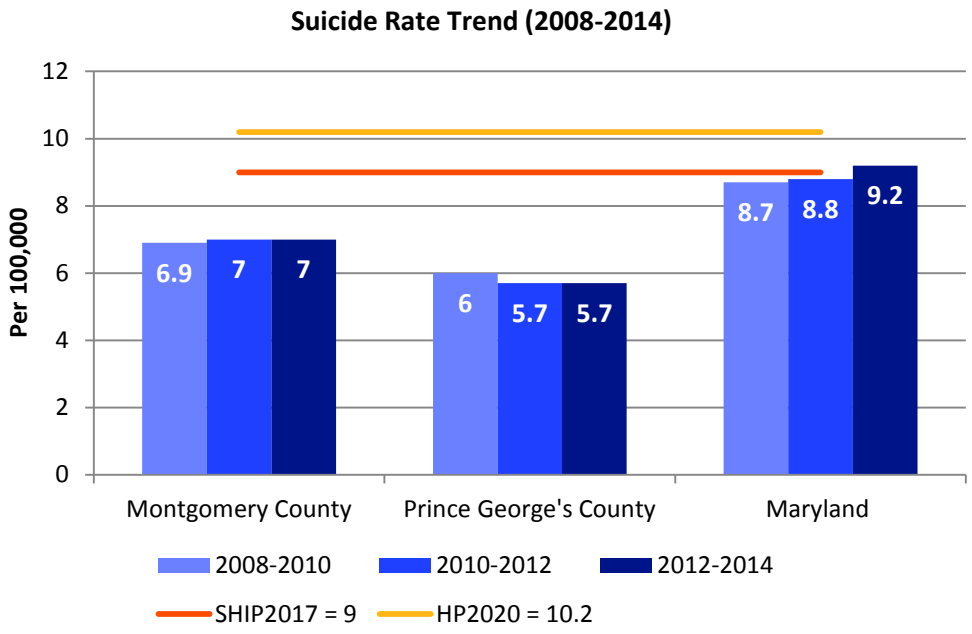


Figure 14. Suicide Rates Over Time in Montgomery County, Prince George's County and Maryland
(Source: DHMH - State Health Improvement Process (SHIP), 2008-2014)

Although the SHIP and Healthy People targets are met, the suicide rate in Montgomery County is higher than that of Prince George's County. When further stratified by race and ethnicity, suicide rates are higher among the white population than the Black population in both Montgomery and Prince George's Counties (Figure 15). The suicide rate among whites in Montgomery County is 1.6 times higher than that of the Blacks in the County, whereas the suicide rate for whites in Prince George's County is 2.2 times higher than that of the Blacks in the County.

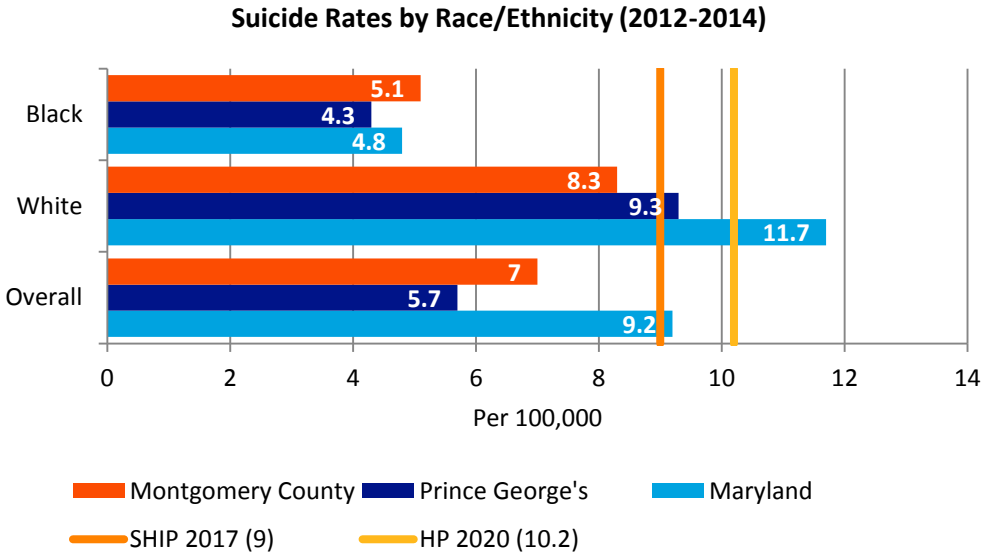


Figure15. Suicide Rates by Race and Ethnicity in Montgomery and Prince George's Counties, and Maryland
(Source: SHIP, 2012-2014)

Domestic Violence

According to the National Coalition Against Domestic Violence, one in three women and one in four men suffer from a form of physical violence at the hands of their partners.[10] Between July 2014 and June 2015, there were numerous deaths due to domestic violence in Maryland: 25 women, 15 men and two children[11]. Both Montgomery and Prince George's Counties met and fell well below the SHIP 2017 target of 445 domestic violence incidents per 100,000 population (Figure 16). However, the domestic violence rates in Prince George's County were slightly higher than that of Montgomery County.

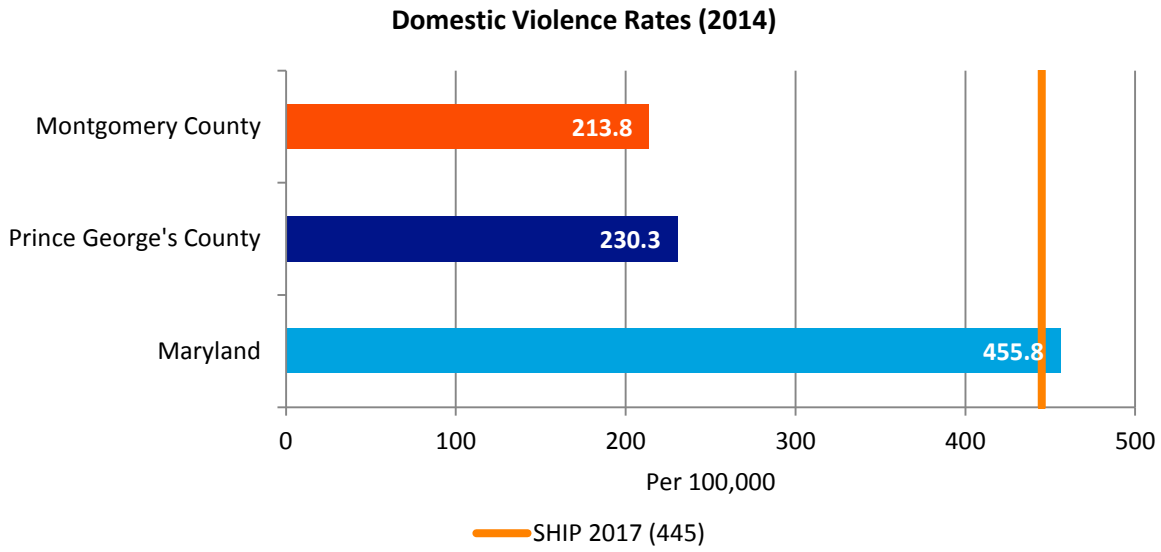


Figure 16. Domestic Violence Rates in Montgomery and Prince George's Counties (Source: SHIP, 2014)

Emergency Department Utilizations Related to Mental Health

Alzheimer's and Other Dementias

Alzheimer's disease is the sixth leading cause of death nationally, and it is the only disease among the top ten causes of death that cannot be prevented, cured or slowed.[12] According to the Alzheimer's Association, there were 919 deaths due to Alzheimer's disease in Maryland in 2013, putting the mortality rate at 15.5 per 100,000 population.

There is a high rate of people who utilize the emergency department for reasons related to Alzheimer's or other dementia (Figure 17). Overall, the state of Maryland and Montgomery County met the SHIP 2017 target of 199.4 ER visits per 100,000 for this indicator, while Prince George's County did not. This ER utilization rate is highest among Prince George's County residents (204.8 visits per 100,000) when compared to Montgomery County (142.7 per 100,000) or Maryland (194.1 per 100,000). Further stratification of the ER utilization rates by race and ethnicity shows that Blacks in Prince George's County used the ER at a much higher rate (243.7 per 100,000) than their racial counterparts. Looking at Montgomery County alone, Black residents are once again the racial group that visited the ER at a higher rate than any other racial group in the county.

[10] National Coalition Against Domestic Violence (NCADV). (2015). *Domestic Violence in Maryland.* Retrieved from: http://www.ncadv.org/files/Maryland.pdf

[11] Maryland Network Against Domestic Violence. (2016). *Domestic Violence Services in Maryland.* Retrieved from: http://mnadv.org/_mnadvWeb/wp-content/uploads/2011/07/DV-in-MD-Handout-rev316.pdf

[12] Alzheimer's Association. (2016). 2016 Alzheimer's Disease Facts and Figures. *Alzheimer's & Dementia 2016;12(4)*. Retrieved from: http://www.alz.org/documents_custom/2016-facts-and-figures.pdf

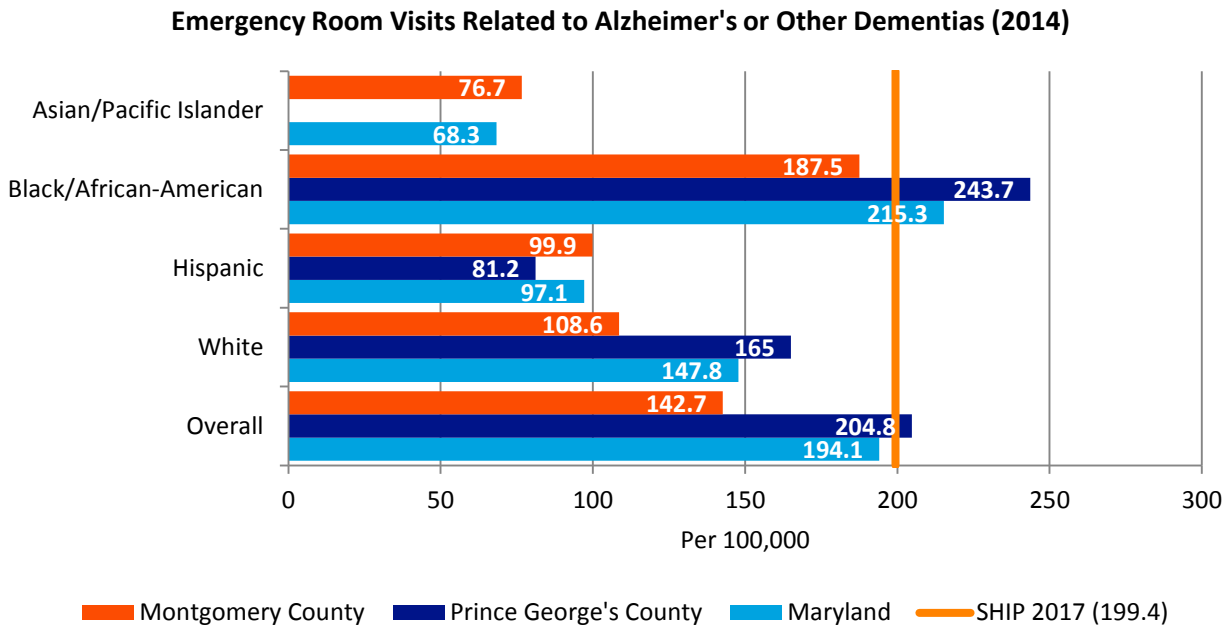


Figure 17. Emergency Room Visits Related to Alzheimer's or Other Dementias
(Source: SHIP, 2014)

Mental Health Disorders

Overall, the emergency department utilization rates related to mental health disorders were similar between Montgomery and Prince George's Counties. Both counties met and fell below the SHIP 2017 target of 3152.6 ER visits per 100,000 populations (Figure 18). When stratified by race and ethnicity, Black residents of Montgomery County and white residents of Prince George's County had higher ER utilization rates than their racial counterparts in their respective counties.

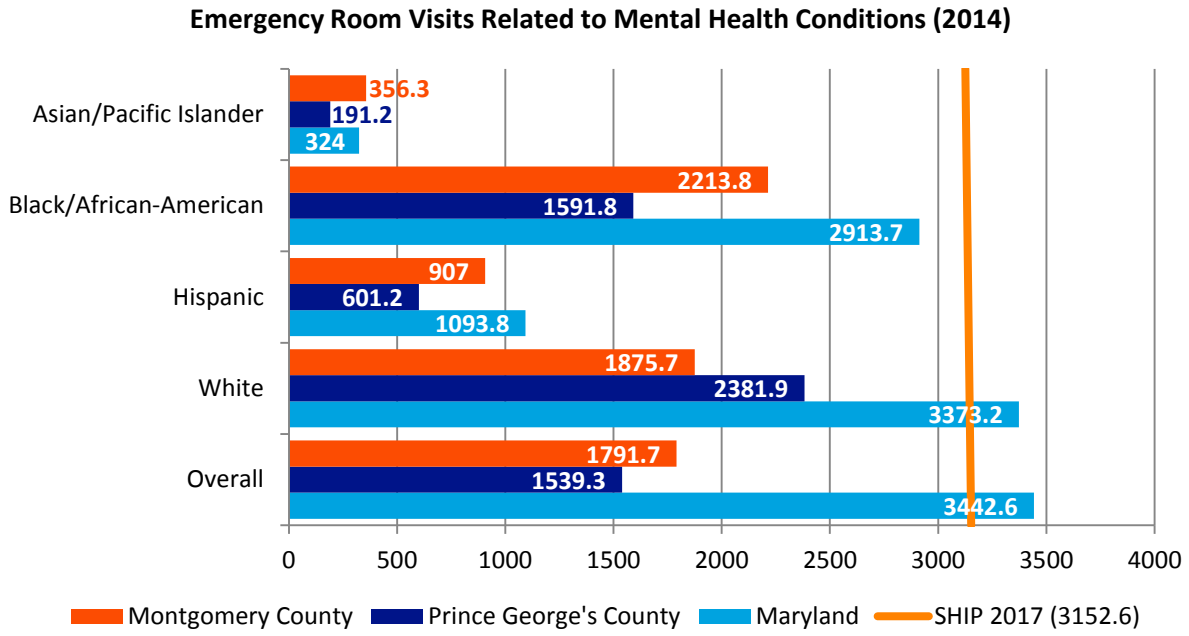


Figure 18. Emergency Room Visits Related to Mental Health Disorders
(Source: SHIP, 2014)

6.2 Substance Abuse

The 2014 National Survey on Drug Use and Health found that 10.2 percent of the United States population used an illicit drug.[13] Marijuana and nonmedical use of prescription drugs accounted for most of the illicit drug use in the U.S.

In Maryland, the rate of drug induced deaths has increased from 2010 to 2014 (Figure 19). The state of Maryland did not meet the SHIP 2017 target of 12.6 deaths per 100,000 population or the Healthy People 2020 target of 11.3 deaths per 100,000. Looking closely at Montgomery and Prince George's Counties, both have consistently met the SHIP and Healthy People targets since 2008. Despite this, both counties have experienced increases in drug induced death rates since the 2010-2012 measurement period.

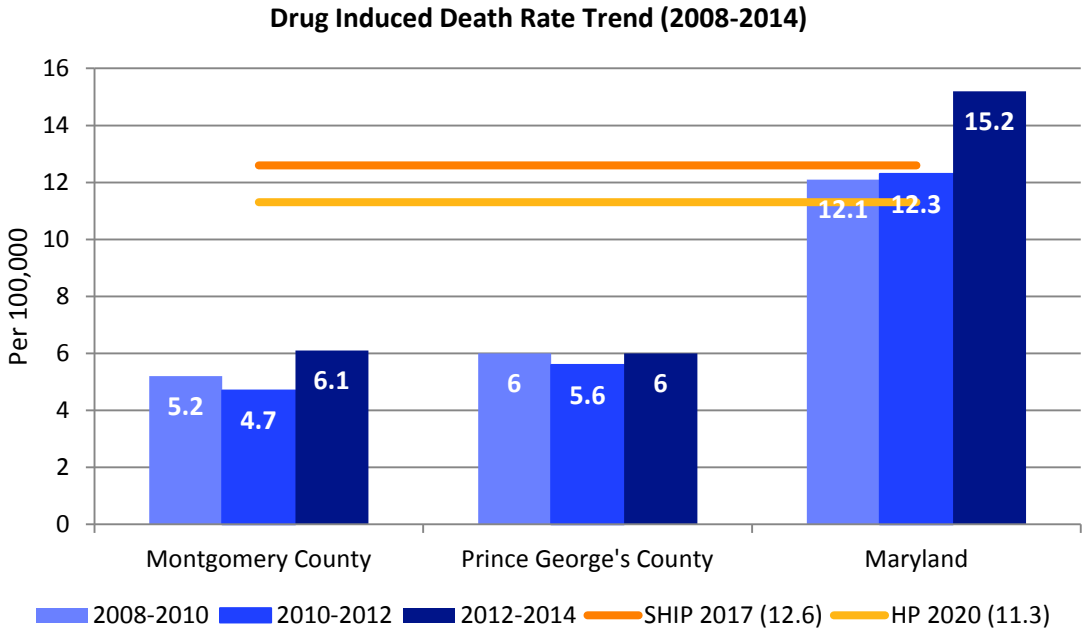


Figure 19. Drug-Induced Death Rates in Montgomery and Prince George's Counties
(Source: SHIP, 2008-2014)

Stratifying the data by race and ethnicity shows the similarities and differences in drug induced death rates in Montgomery and Prince George's Counties compared to the state of Maryland (Figure 20). While the death rate among Blacks in Montgomery and Prince George's Counties are similar, there is a major difference in that of the white population in the two counties. Whites in Montgomery County experience drug related deaths at a lower rate (8.8 per 100,000) than whites in Prince George's County (19.1 per 100,000). Both counties, however, have much lower rates of drug related deaths when compared to Maryland overall.

[13] Center for Behavioral Health Statistics and Quality. (2015). *Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health*. Retrieved from: http://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf

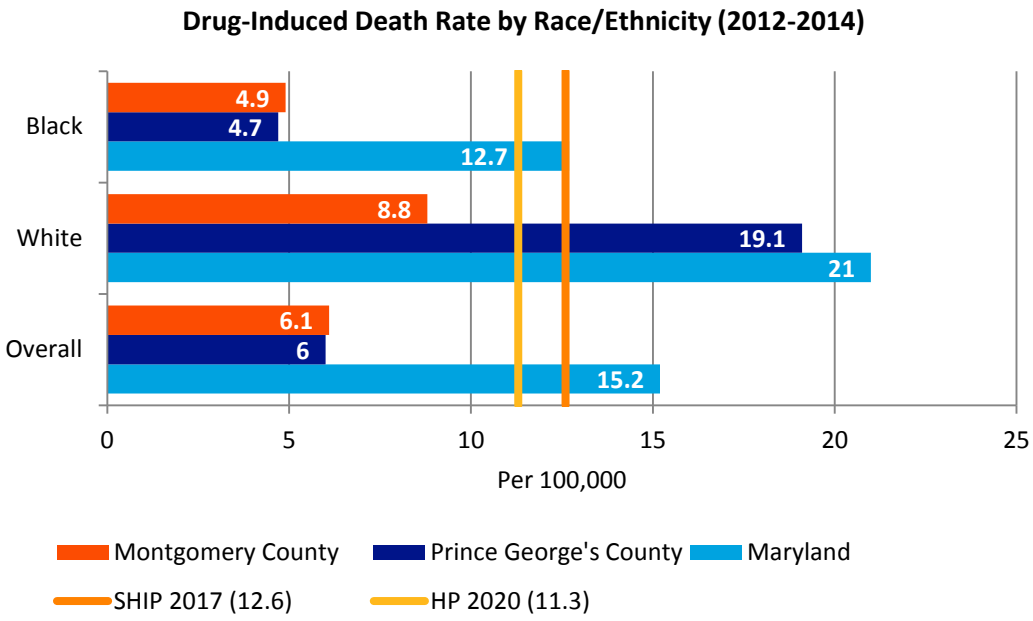


Figure 20. Drug Induced Death Rates by Race and Ethnicity
(Source: SHIP, 2012-2014)

A survey of illicit drug use in Montgomery County found that 7 percent of the population reported having used drugs such as cocaine, heroin, hallucinogens, inhalants, and other prescription-type drugs.[14] When stratified by age groups, the 12-–17 year old population reported the highest use of illicit drugs, followed by the 18-25 age group (Figure 21).

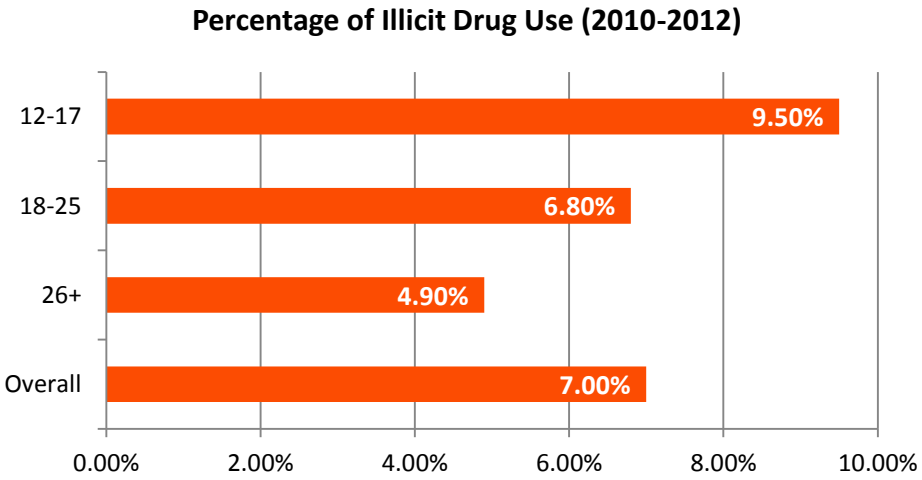


Figure 21. Illicit Drug Use in Montgomery County
(Source: Healthy Montgomery, 2010-2012)

Smoking

Overall, tobacco and cigarette use have decreased over the years. The national percentage of adolescent smokers decreased from 28.5 percent in 2001 to 15.7 percent in 2013.[15] As of 2014, 25.2 percent of the population reported tobacco use while 20.8 percent reported cigarette use.

[14] Healthy Communities Institute. (2016). Illicit Drug Use. *Healthy Montgomery.* Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=283&localeId=1259

A survey of Montgomery County adolescents in grades 9 to 12 found a significant decrease in the rate of adolescent tobacco users from 19.20 percent in 2010 to 12.10 percent in 2013 (Figure 22). [16] This decrease has helped the County meet the SHIP 2017 target of 15.20 percent adolescent tobacco smokers.

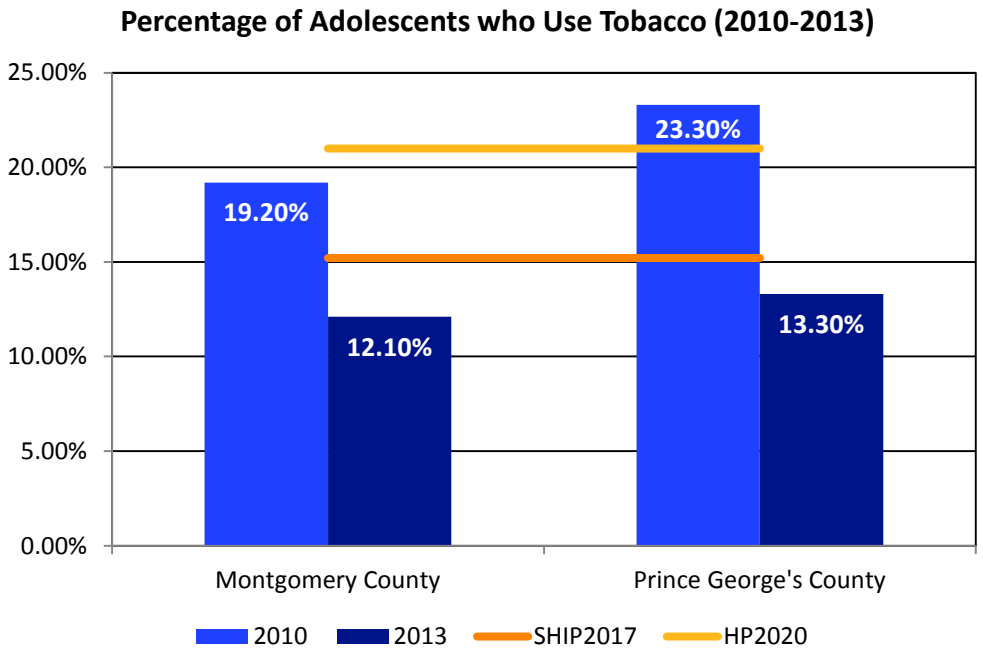


Figure 22. Adolescents Using Tobacco in Montgomery County and Prince George's County (Source: Healthy Montgomery and PGC Health Zone, 2013)

Adult smokers comprise 7.90 percent of Montgomery County residents and 11.80 percent of Prince George's County residents (Figure 24). Overall, both counties meet the SHIP target of 15.5 percent and Healthy People 2020 target of 12 percent adult smokers. Still, when stratified by race and ethnicity, Blacks in Montgomery County and whites in Prince George's County do not meet the Healthy People 2020 target; however, both groups do meet the SHIP target (Figure 23).

[15] Centers for Disease Control and Prevention (CDC) – Office on Smoking and Health, & National Center for Chronic Disease Prevention and Health Promotion. (2016). Trends in current cigarette smoking among high school students and adults, United State, 1965-2014. Retrieved from: http://www.cdc.gov/tobacco/data_statistics/tables/trends/cig_smoking/

[16] Healthy Communities Institute. (2016). Adolescents who use tobacco. *Healthy Montgomery.* Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=2251&localeTypeId=2&localeId=1259

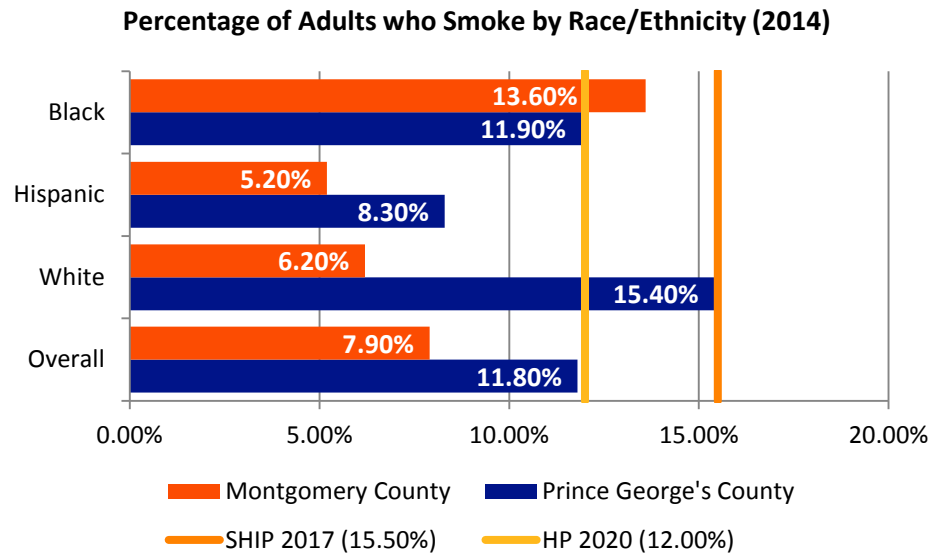


Figure 23. Adults who Smoke by Race/Ethnicity
(Source: Healthy Montgomery and PGC Health Zone, 2014)

Most of the adult smokers in both counties fall into the 45–64 years age group (Figure 24). Additionally, the 45–64 age group in Prince George's County is the only group that does not meet Healthy People 2020's target. The data also shows that males are more likely to smoke than females in both counties (Figure 25). More specifically, males in Prince George's County smoke at the highest rate, going over the Healthy People 2020 target.

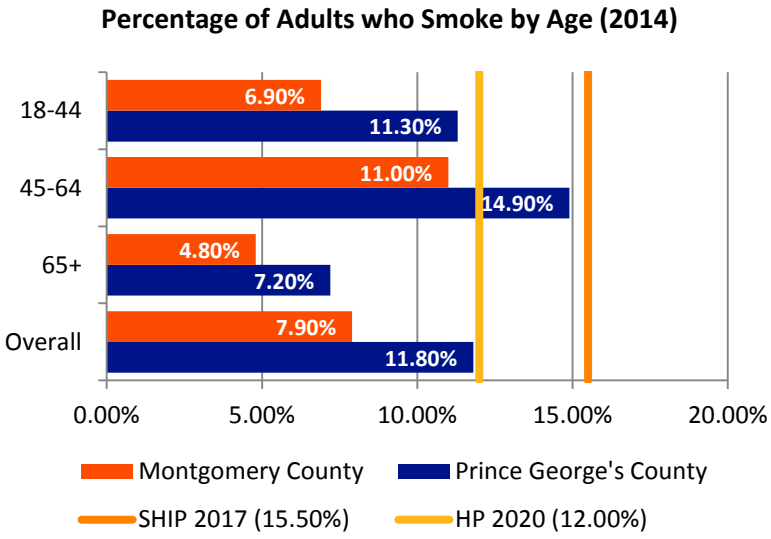


Figure 24. Adults who Smoke by Age in Montgomery County and Prince George's County
(Source: Healthy Montgomery and PGC Health Zone, 2014)

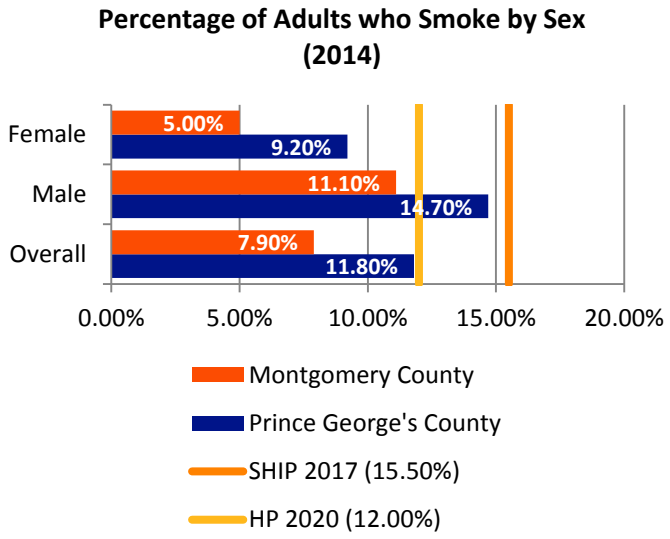


Figure 25. Adults who Smoke by Sex in Montgomery County and Prince George's County
(Source: Healthy Montgomery and PGC Health Zone, 2014)

A survey of Montgomery County residents over the age of 12 found that 5.40 percent of the population reported having smoked marijuana (Figure 26). The highest rate of marijuana use was among the 12-17 year old adolescents.

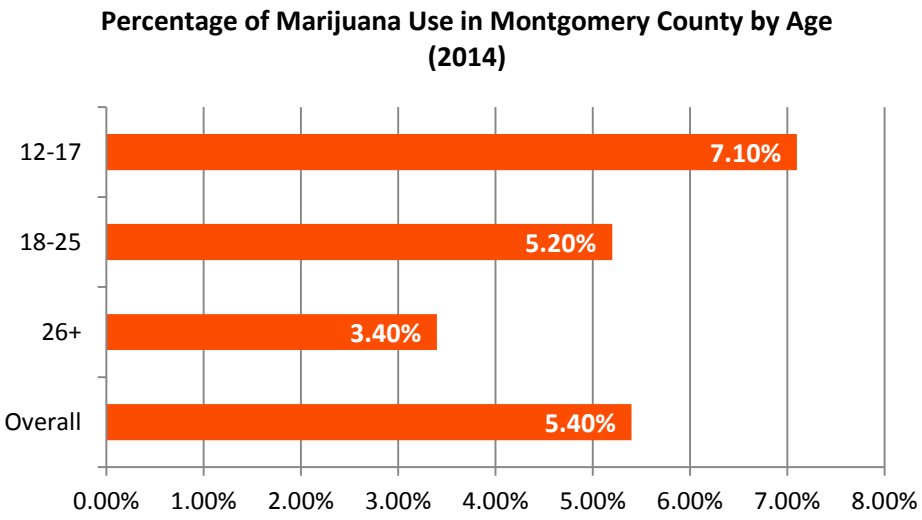


Figure 26. Marijuana Use in Montgomery County by Age, 2010-2012
(Source: Healthy Montgomery, 2010-2012)

Alcohol

Binge drinking, defined as consuming five or more drinks on a single occasion, is a concern among all age groups. Figure 27 below shows the trend of binge drinking among people aged 12–20 years across the state of Maryland.[17] According to SAMHSA, the percentage of binge drinkers for 2012–2013 is similar to the national percentage.

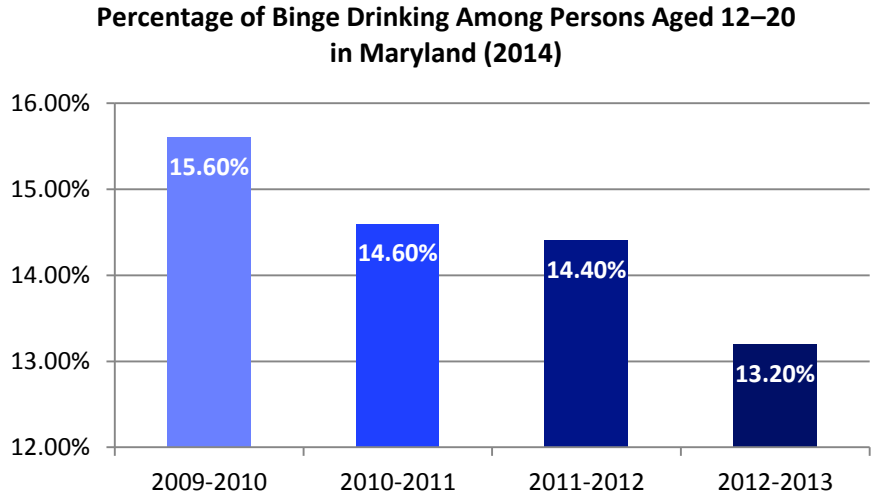


Figure 27. Binge Drinking Among Youths Aged 12-20 in Maryland, 2009 – 2013
(Source: SAMHSA Maryland Behavioral Health Barometer, 2014)

At the county level, 12.10 percent of Montgomery County residents (Figure 28) and 14.00 percent of Prince George's County residents (Figure 29) have reported binge drinking. In Montgomery County, 18–25 year olds engage in more binge drinking than their counterparts, followed by those over the age of 26. In Prince George's County, the highest rate of binge drinking occurs in the 18–44 age group.

[17] Substance Abuse and Mental Health Services Administration. (2015). *Behavioral Health Barometer: Maryland, 2014.* Retrieved from: http://www.samhsa.gov/data/sites/default/files/State_BHBarometers_2014_1/BHBarometer-MD.pdf

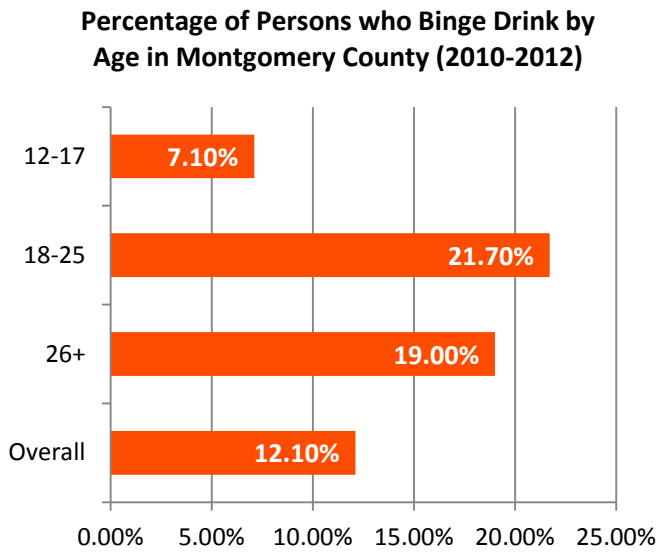


Figure 28. Persons who Binge Drink by Age in Montgomery County
(Source: Healthy Montgomery, 2010-2012)

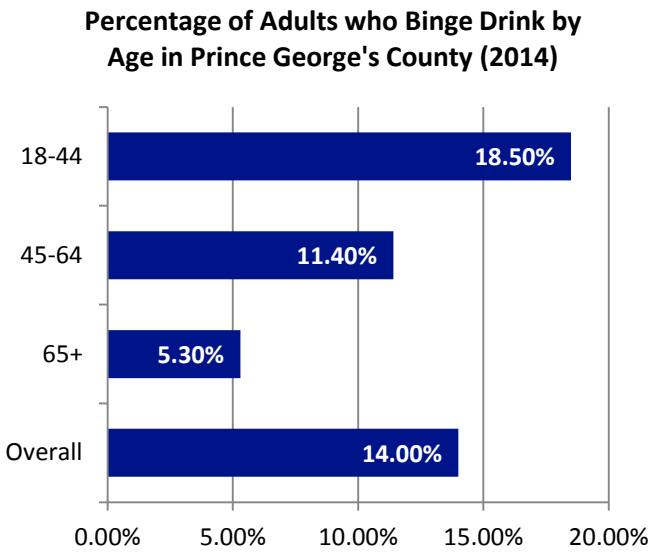


Figure 29. Persons who Binge Drink by Age in Prince George's County
(Source: PGC Health Zone, 2014)

In terms of gender, males in Prince George's County were more likely than females to binge drink (Figure 30). The binge drinking rates are more varied when the data is stratified by race and ethnicity. As Figure 31 shows, the binge drinking in Prince George's County was highest among the white population, followed by those who identify as Other and Hispanics. The group with the lowest binge drinking rate was Asians.

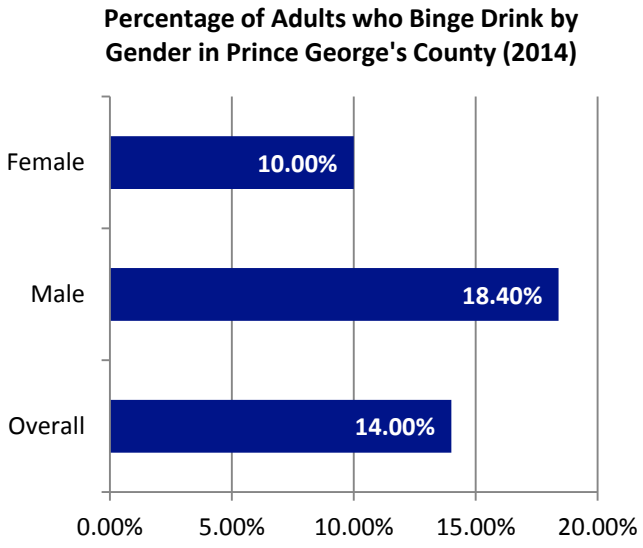


Figure 30. Persons who Binge Drink by Gender in Prince George's County
(Source: PGC Health Zone, 2014)

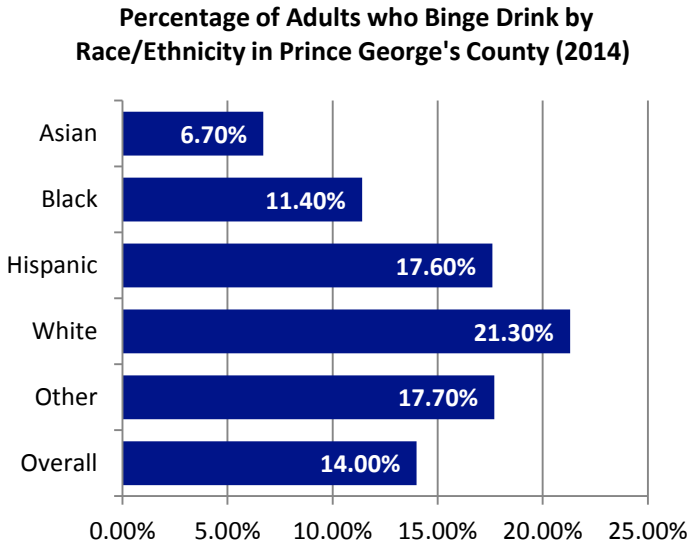


Figure 31. Persons who Binge Drink by Race/Ethnicity in Prince George's County
(Source: PGC Health Zone, 2014)

Alcohol use is defined as having at least one drink of alcohol within the preceding month.[18] When surveyed, 58 percent of Montgomery County residents reported having consumed alcohol within the month preceding the survey (Figure 33). When broken down into age groups, the 18–25 year olds reported the highest rate of alcohol use at 67.8 percent.

[18] Healthy Communities Institute. (2016). Persons who binge drink. *Healthy Montgomery.* Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=353&localeTypeId=2&localeId=1259

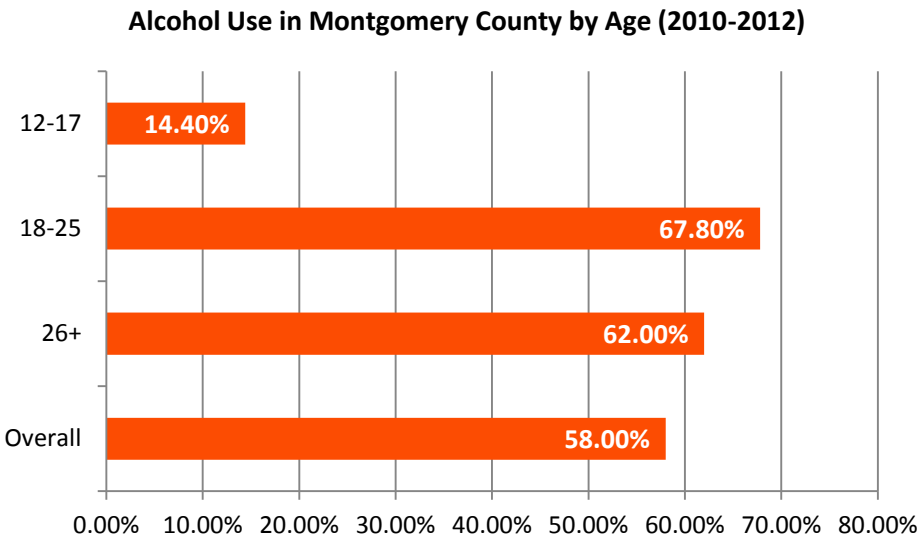


Figure 33. Alcohol Use in Montgomery County by Age
(Source: Healthy Montgomery, 2010-2012)

Montgomery and Prince George's Counties have seen an increase in the emergency room visit rates due to alcohol/substance abuse in the past few years. However, the increases in Prince George's County have been significant (Figure 34). Even though the ER visit rate is still far below the SHIP target of 1400.9 visits per 100,000, the increase is still a concern.

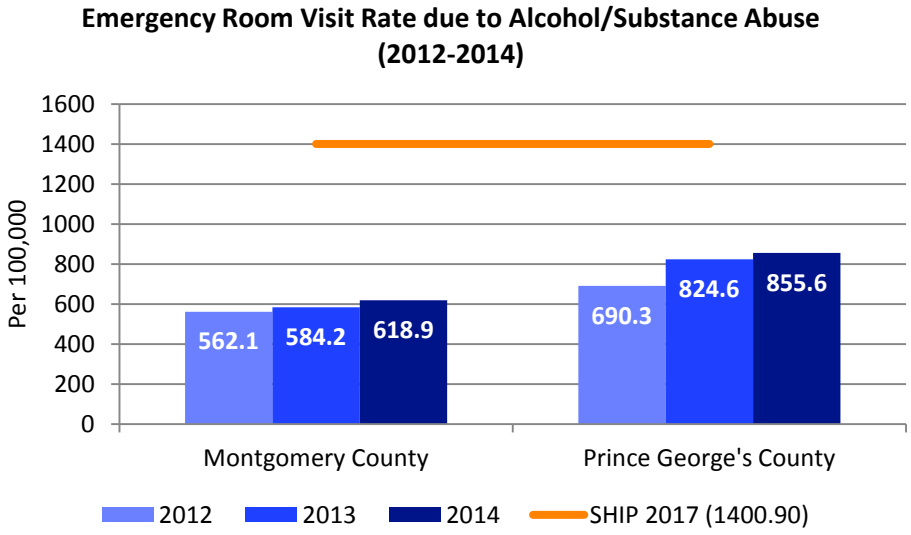


Figure 34. Emergency Room Visit Rate due to Alcohol/Substance Abuse in Montgomery County and Prince George's County
(Source: SHIP, 2012-2014)

Although both counties meet the SHIP target, emergency room utilization rates are varied among different races and ethnicities (see Figure 35). In Montgomery County, the Black residents have the highest emergency room utilization rates for addictions-related conditions followed by whites. Inversely, in Prince George's County, whites have the highest ER utilization rates followed by Blacks.

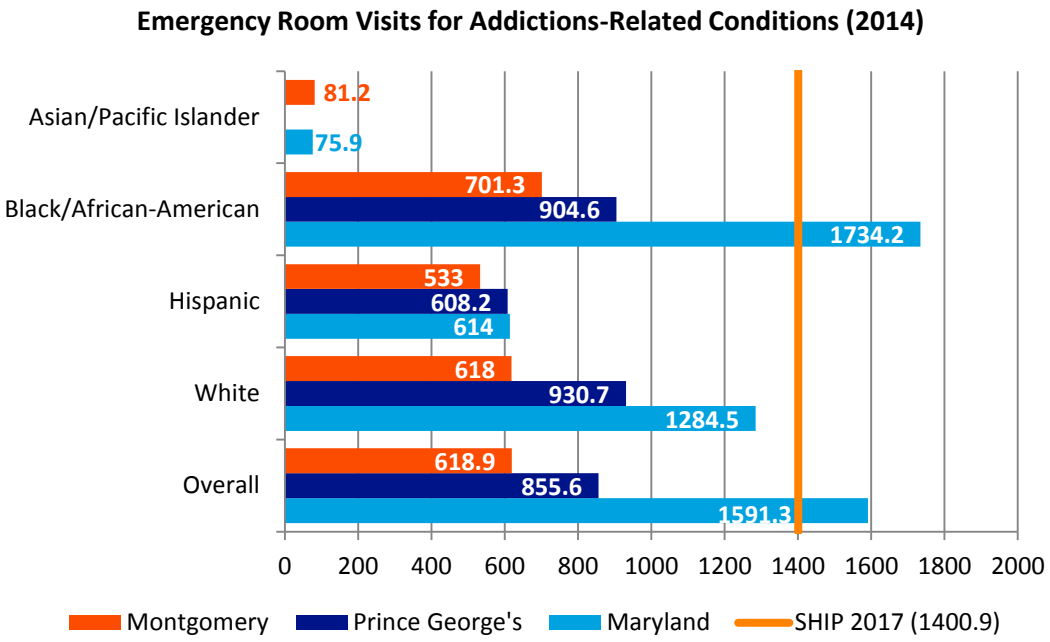


Figure 35. Emergency Room Visits for Addictions Related Conditions
(Source: SHIP, 2014)
Note: No data for Asians/Pacific Islanders in Prince George's County due to small sample

6.3 The Intersection of Mental Health and Substance Abuse in Montgomery County

In Montgomery County, an estimated 18.5 percent of the adult population was reported to have a mental, behavioral or emotional distress disorder that met DSM-IV criteria.[19] The majority of this population has mildly disabling mental illness (Figure 36) and falls between the ages of 26 to 49 years (Figure 37).

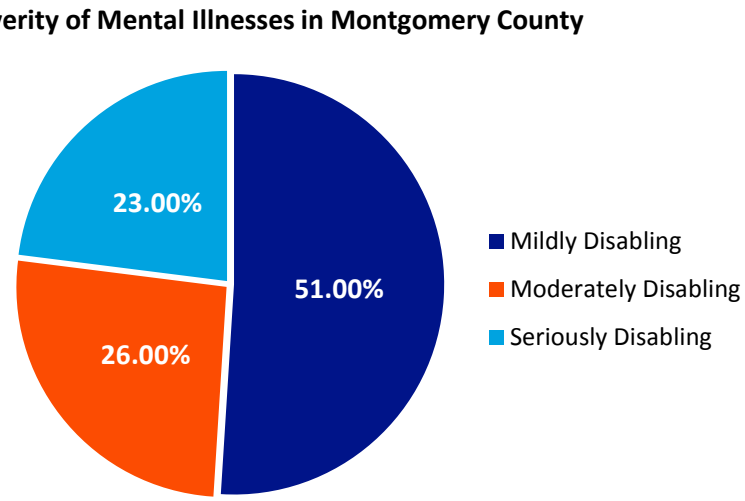


Figure 36. Severity of Mental Illnesses in Montgomery County, 2013
(Source: Behavioral Health in Montgomery County, 2013)

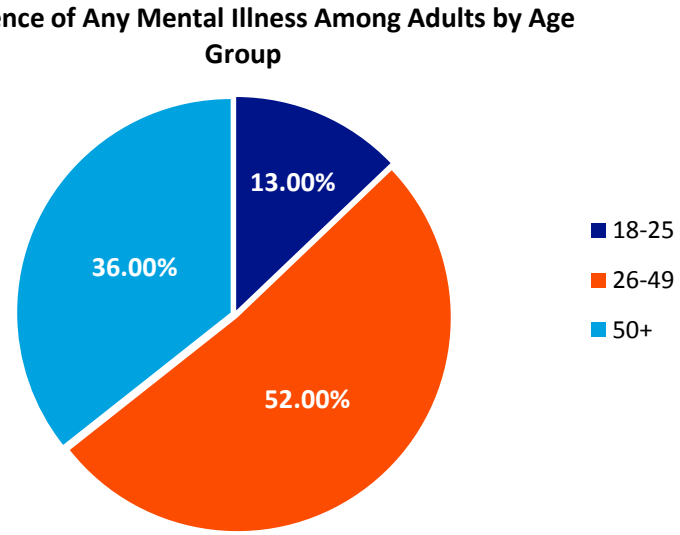


Figure 37. Prevalence of Mental Illness among Adults by Age Groups, 2013
(Source: Behavioral Health in Montgomery County, 2013)

[19] Carrizosa, N. & Richards, S. (2015). Behavioral health in Montgomery County; Report number 2015-13. *Office of Legislative Oversight*. Retrieved from: http://www.montgomerycountymd.gov/OLO/Resources/Files/2015_Reports/OLO%20Report%202015-13%20Behavioral%20Health%20in%20Montgomery%20County.pdf

Substance abuse is also more prevalent among adults with reported mental illness than it is in the adult population reporting no mental illness. Figure 38 below shows that 17.5 percent of the population reporting mental illness also experienced substance use disorder.

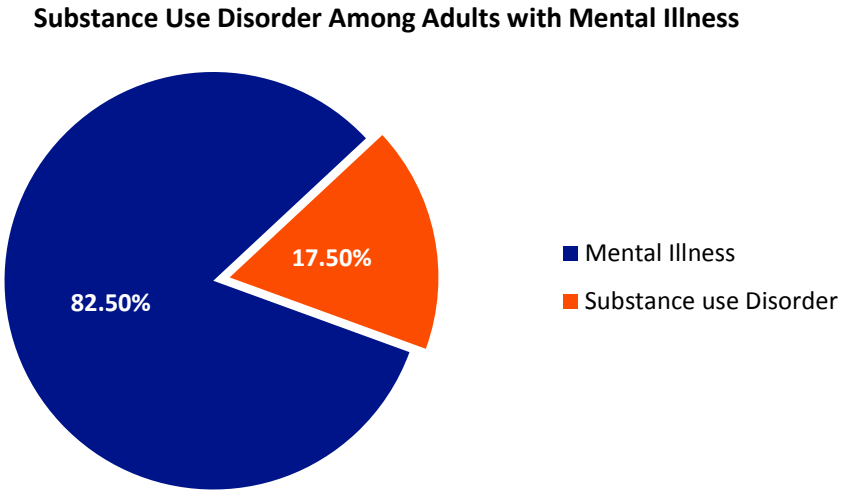


Figure 38. Substance Use Disorder Among Adults with Mental Illness, 2013
(Source: Behavioral Health in Montgomery County, 2013)

When considering the population 12 years and older with mental illnesses, the rate of substance use disorder increases to 29.5 percent. The highest rate of substance use is among the 18-25 year olds with mental illness (Figure 39).

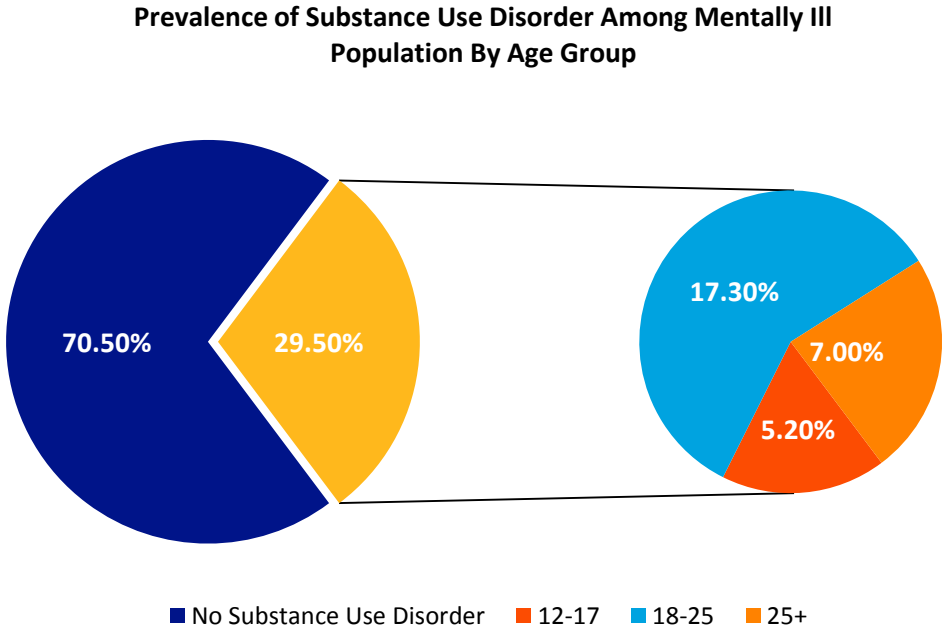


Figure 39. Prevalence of Substance Use Disorder among Mentally Ill Population by Age Group, 2013
(Source: Behavioral Health in Montgomery County, 2013)

The relationship between severity of mental illness, age, and substance dependence is further explored in Figure 40. It is shown that 18–25 year olds report the highest use of drugs and alcohol across the board, followed by 26-49 year olds. This is especially concerning since 18–25 year olds make up only 13 percent of the mentally ill adult population.

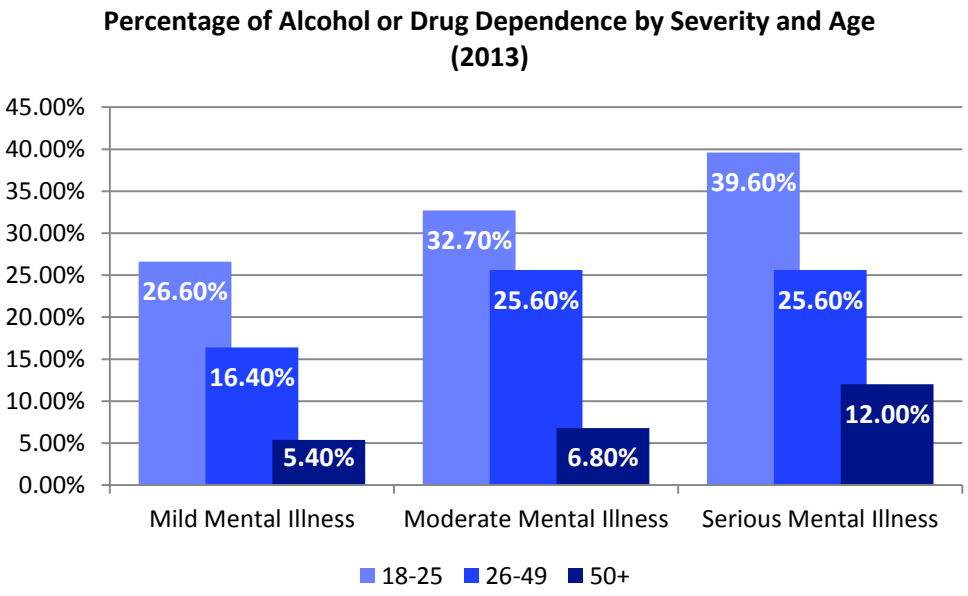


Figure 40. Alcohol and Drug Dependence by Severity of Mental Illness and Age
(Source: Behavioral Health in Montgomery County, 2013)

For comparison, an estimated 8.2 percent of the general Montgomery County population aged 12 and over had an alcohol or drug dependence in 2013. Figure 41 below shows the rates of alcohol and drug abuse versus dependence among the general population.

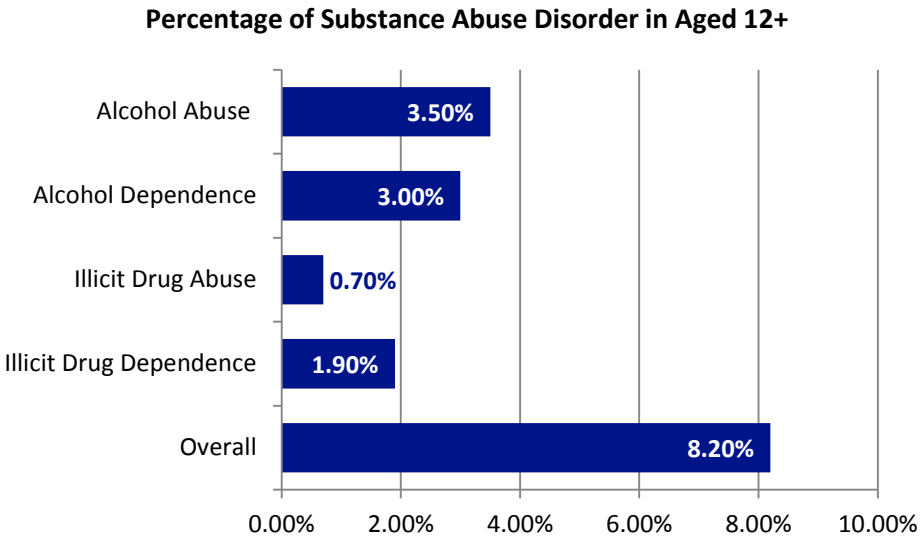


Figure 41. Substance Use Disorder among General Population Aged 12 and Over
(Source: Behavioral Health in Montgomery County, 2013)

Community Resources

In Washington Adventist Hospital's Community Benefit Service Area, there are behavioral health services available in both Montgomery and Prince George's Counties:

- In Prince George's County, both hospitals of Dimensions Healthcare (Prince George's Hospital Center and Laurel Regional hospital) provide behavioral health services. Laurel Regional Hospital offers inpatient, partial hospitalization programs, community support and outreach. Prince George's Hospital Center provides emergency evaluations and has 23 hour observation beds.
- Prince George's County Health Department's Mental Health Division provides: County Crisis Services that operate 24 hours a day, 365 days a year. This service has a mobile crisis team, urgent care center, and In-home intervention team. Additional services include: services for persons with Medical Assistance or no insurance, assistance with housing, outpatient treatment, support groups for patients and families, and services for children and adolescents.
- Additional behavioral health resources in Prince George's County include: the ARC of Prince George's County, the Maryland Community Connection, the Mental Health Association (MHA), and the National Alliance on Mental Illness (NAMI). Services from these providers include advocacy, support groups, education, family support, information and referral.
- There is a variety of behavioral health services and resources in the Montgomery County area. There are four hospitals that provide inpatient care: Adventist Behavioral Health, MedStar Montgomery, Suburban Hospital, and Washington Adventist Hospital. These providers also offer outpatient care as well.
- In addition to private health care providers, there is an array of additional behavioral health services in Montgomery County, including: the Montgomery County Health Department's Crisis Center with 24 hour telephone or walk-in services as well as services for children and adolescents; the Reginald S. Lourie Center for Infants and Young Children; The Anxiety and Depression Association of America; the Access Team; the Mental Health Association (MHA); and the National Alliance on Mental Illness (NAMI). Services from these providers include individual counseling, education, advocacy, assistance for substance abuse, and adjunct services such as legal assistance and housing.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 7: Asthma

Asthma

KEY FINDINGS

- Nationally, the prevalence of asthma is higher in children compared to adults, and higher in Black residents compared to other racial groups, and individuals who fall below 100 percent of the poverty level.

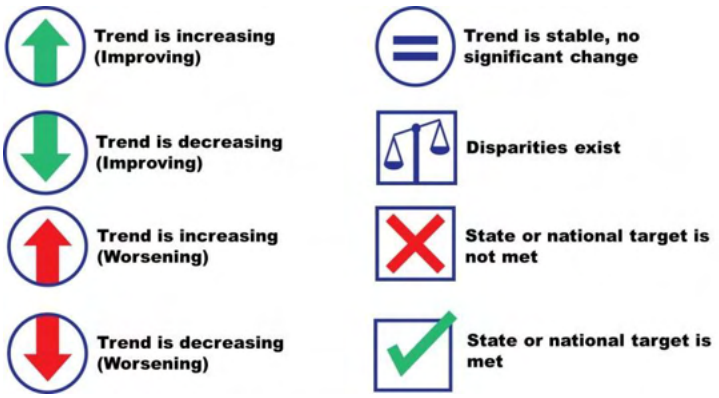
- In Montgomery County, there is a downward trend in prevalence of asthma from 2012 to 2014.

- The prevalence of asthma in Prince George's County (14.3%) is higher than the prevalence in Montgomery County (9.8%) and in Maryland (13.5%).

- Blacks in Montgomery County have the highest rates of asthma compared to other racial groups. In Prince George's County, Asians and those who identify as other race have the highest rates of asthma. In both counties, Hispanics have the lowest rates of asthma. There is a higher prevalence of asthma among females compared to males in both counties.

- Emergency room visit rates due to asthma have been on a downward trend in Montgomery and Prince George's Counties from 2012 to 2014.

- Both counties meet the SHIP 2017 target for emergency room visit rates due to asthma.



Asthma

Impact

Asthma is a chronic inflammatory disease of the lungs where airways in the lungs constrict and swell to restrict airflow.[1,2] Asthma attacks can range from mild to severe, requiring immediate medical attention.[3] The disease can affect people of all ages, ethnicities, genders, and races, and requires long-term care and management. Although little is understood regarding the causes of asthma and how to prevent it from developing, methods for managing the disease are well-established. Major risk factors for developing asthma are genetic predisposition and inhalation exposure to environmental particles or allergens (e.g. tobacco smoke, pollen, and chemical irritants).[4] Asthma is the most common non-communicable disease among children.[5] Children are more sensitive to particulate matter and other irritants that can trigger asthma attacks due to their smaller and narrower respiratory pathways. Therefore, air quality has a large impact on children's respiratory health.

Nationally, asthma prevalence has increased to its highest recorded level in the U.S. from 7.3 percent in 2001 to 8.4 percent in 2010 (25.7 million people).[6] In 2014, asthma prevalence has also significantly varied among various population subgroups. It is higher among females (9.0 percent) than males (6.3 percent); higher among children and adolescents (8.6 percent) than adults 18 and older (7.4 percent); higher among Blacks (9.9 percent) than whites (7.6 percent); significantly higher among Puerto Ricans (16.5 percent) than Hispanics (6.7 percent); and higher among those living below the poverty line (10.4 percent) than those at 200 percent above the poverty line and over (7.6 percent).[7]

Despite varying prevalence of asthma among population subgroups nationwide and within Maryland, the overall prevalence of asthma among adults in the state from 2011 to 2014 has remained relatively stable between 13.5 percent and 13.8 percent (Figure 1).

Prevalence

Following a similar trend to that of Maryland, the prevalence of asthma among adults in Montgomery and Prince George's counties has fluctuated from 2011 to 2014, most recently showing a decrease from 2013 to 2014. At 14.3 percent, Prince George's County has a higher prevalence compared to that of Montgomery County (9.8 percent) and Maryland (13.5 percent) (Figure 1).

[1] Mayo Clinic. Asthma. (2016). Retrieved from: http://www.mayoclinic.org/diseases-conditions/asthma/basics/definition/CON-20026992

[2] American Asthma Foundation. Asthma. (2015, September). Retrieved: from http://www.aafa.org/page/asthma-symptoms.aspx?gclid=CMPpycG81c8CFQlZhgodftINTQ

[3] American Asthma Foundation. Asthma. (2015, September). Retrieved from: http://www.aafa.org/page/asthma-symptoms.aspx?gclid=CMPpycG81c8CFQlZhgodftINTQ

[4] World Health Organization. (2013). Asthma. Retrieved from: http://www.who.int/mediacentre/factsheets/fs307/en/

[5] World Health Organization. (2013). Asthma. Retrieved from: http://www.who.int/mediacentre/factsheets/fs307/en/

[6] Akinbami, L. J., Moorman, J. E., Bailey, C., Zahran, H. S., King, M., Johnson, C. A., & Liu, X. (2012). Trends in asthma prevalence, health care use, and mortality in the United States, 2001–2010. Retrieved from: http://www.cdc.gov/nchs/products/databriefs/db94.htm

[7] Centers for Disease Control and Prevention (CDC). (2016). Most recent asthma data. Retrieved from: http://www.cdc.gov/asthma/most_recent_data.htm

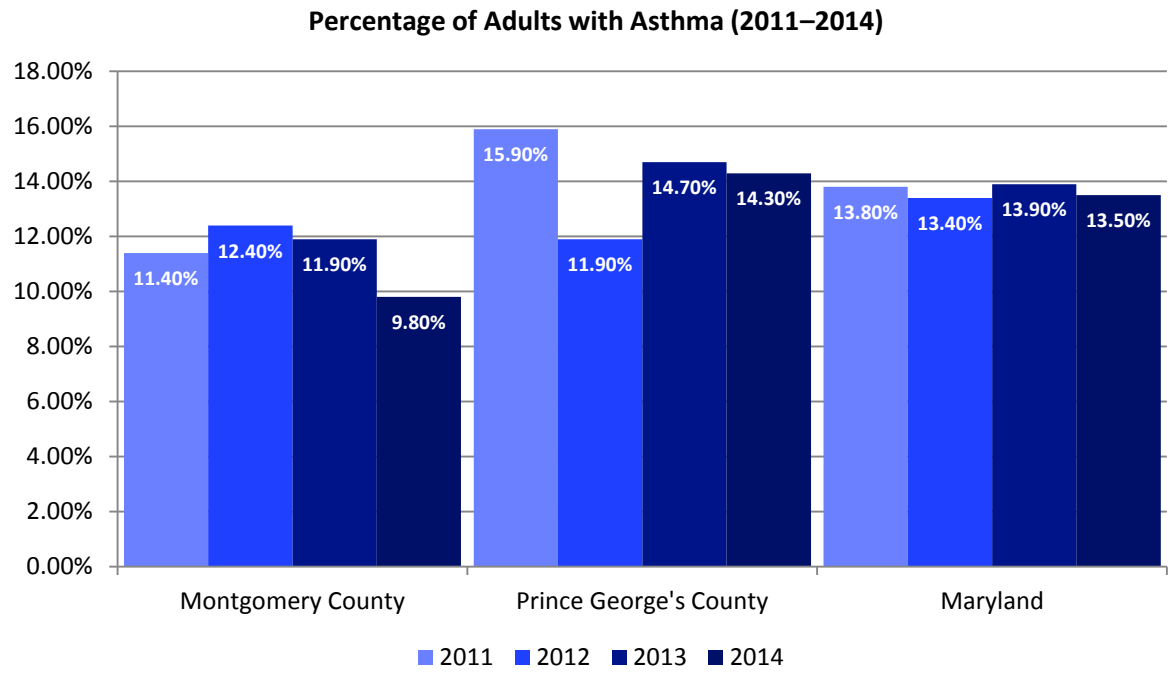


Figure 1. Percentage of adults who have ever been told by a healthcare provider that they have asthma in Montgomery County, Prince George's County, and Maryland, 2011–2014.
(Sources: Healthy Montgomery, PGC Health Zone, & Maryland Behavioral Risk Factor Surveillance System (BRFSS))

In both Montgomery and Prince George's Counties, disparities in asthma prevalence can be seen across different age, sex, racial, and ethnic groups. Asthma prevalence rates among females in Montgomery County are 11.0 percent compared to 8.6 percent among males (Figure 2). This difference is even more pronounced in Prince George's County with females having a prevalence rate nearly twice that of males (18.5 percent compared to 9.6 percent) (Figure 3).

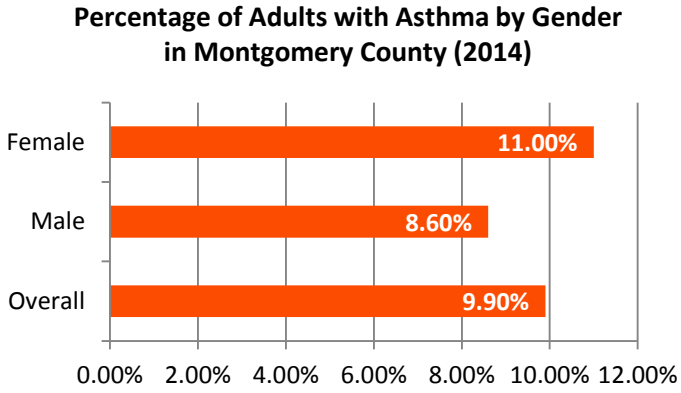


Figure 2. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Sex in Montgomery County, 2014
(Sources: Healthy Montgomery, 2014)

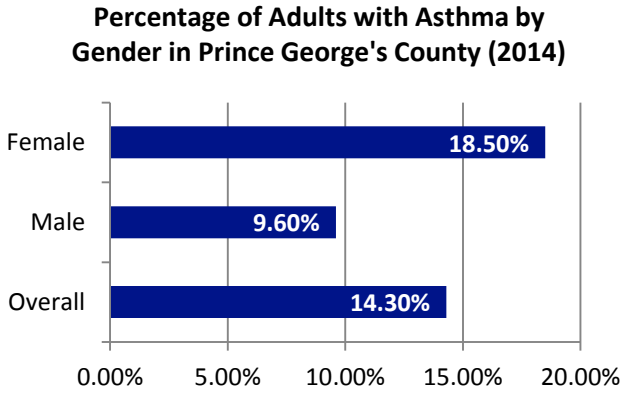


Figure 3. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Sex in Prince George's County, 2014
(Sources: PGC Health Zone, 2014)

When broken down by age, in both counties the highest asthma rates are seen among 18-44 year olds followed by individuals 65 and over (Figure 4 and Figure 5).

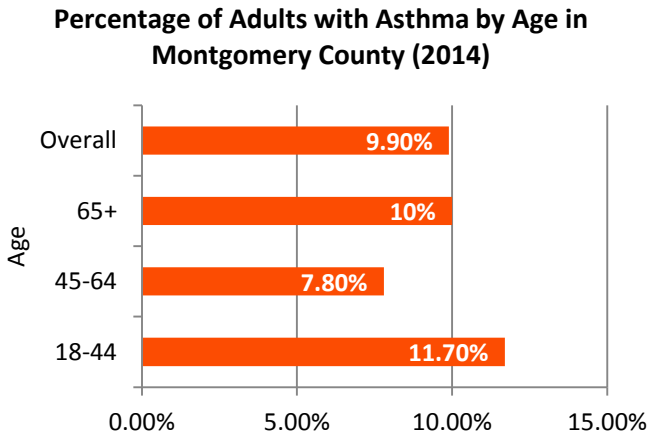


Figure 4. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Age in Montgomery County, 2014
(Sources: Healthy Montgomery, 2014)

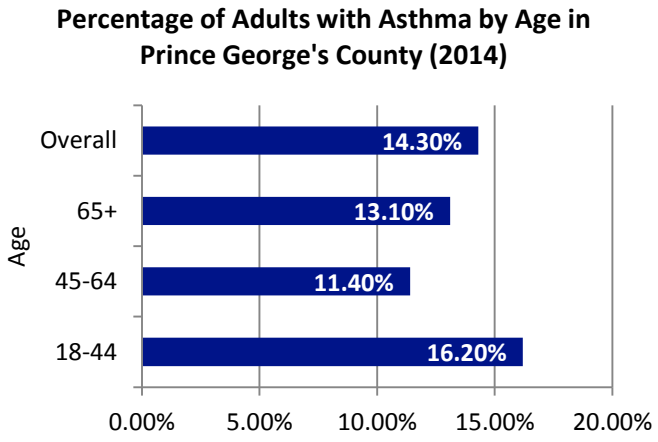


Figure 5. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Age in Montgomery County, 2014
(Sources: PGC Health Zone, 2014)

Broken down by race and ethnicity, non-Hispanic Blacks have the highest asthma rates in Montgomery County at 13.3 percent, while Asians are seen to have the lowest rates at 6.3 percent (Figure 6). Alternatively in Prince George's County, individuals who identified as other race have the highest asthma rates at 20.4 percent followed closely by Asians (20.1 percent), with Hispanics (5.6 percent) having the lowest rates of asthma (Figure 7).

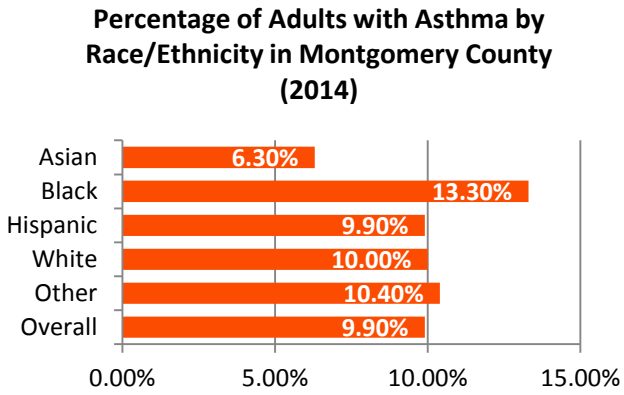


Figure 6. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Race/Ethnicity in Montgomery County, 2014
(Sources: Healthy Montgomery)

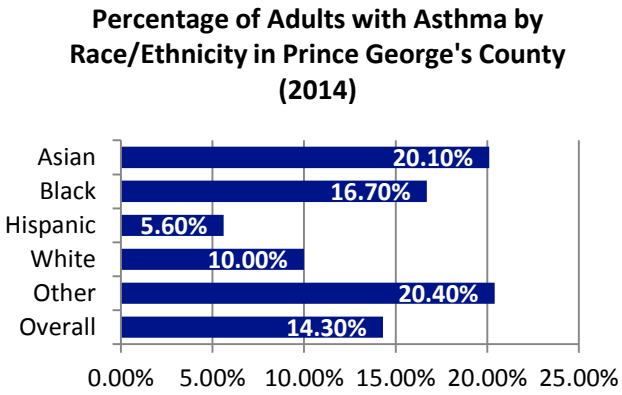


Figure 7. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Race/Ethnicity in Prince George's County, 2014
(Sources: PGC Health Zone)

Emergency Room Use

Emergency room visit rates due to asthma have been on a downward trend in Montgomery and Prince George's Counties as well as in Maryland from 2012 to 2014 (Figure 8). With rates lower than that of the state, both Montgomery and Prince George's Counties have surpassed the SHIP 2017 goal of 62.5 emergency room visits per 10,000 population, while the state overall, with a rate of 68.3 per 10,000, has not. Despite both counties having met the SHIP target, it is important to note that emergency room visit rates due to asthma in Prince George's county (52.8 per 10,000 population) are substantially higher than those in Montgomery County (36.3 per 10,000 population).

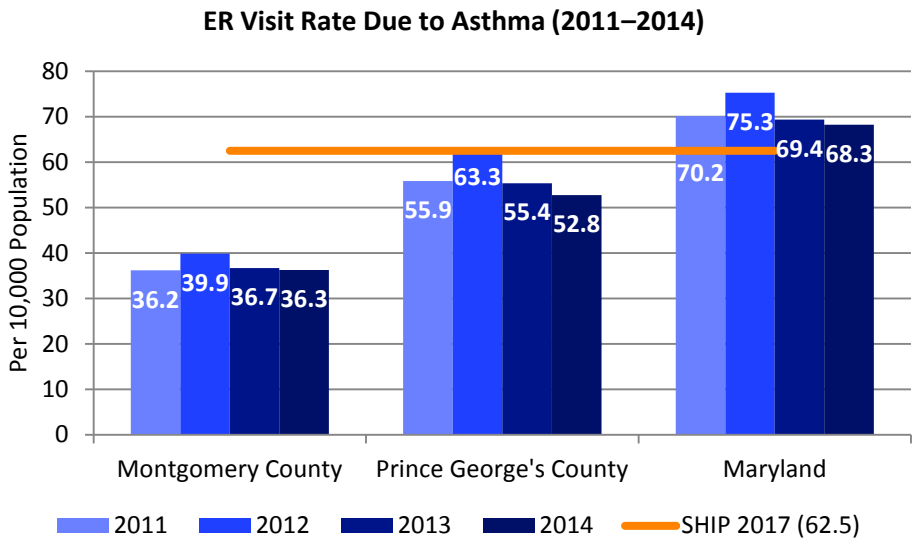


Figure 8. Emergency Room Visit Rate due to Asthma per 10,000 Population in Montgomery County, Prince George's County, and Maryland, 2011–2014.

(Sources: Healthy Montgomery & PGC Health Zone, 2014)

Medicare Population

There has been a slight increase in the percentage of Medicare beneficiaries treated for asthma across Montgomery County, Prince George's County and Maryland (Figure 9). More Medicare beneficiaries in Prince George's County are treated for asthma than in Montgomery County or the state overall.

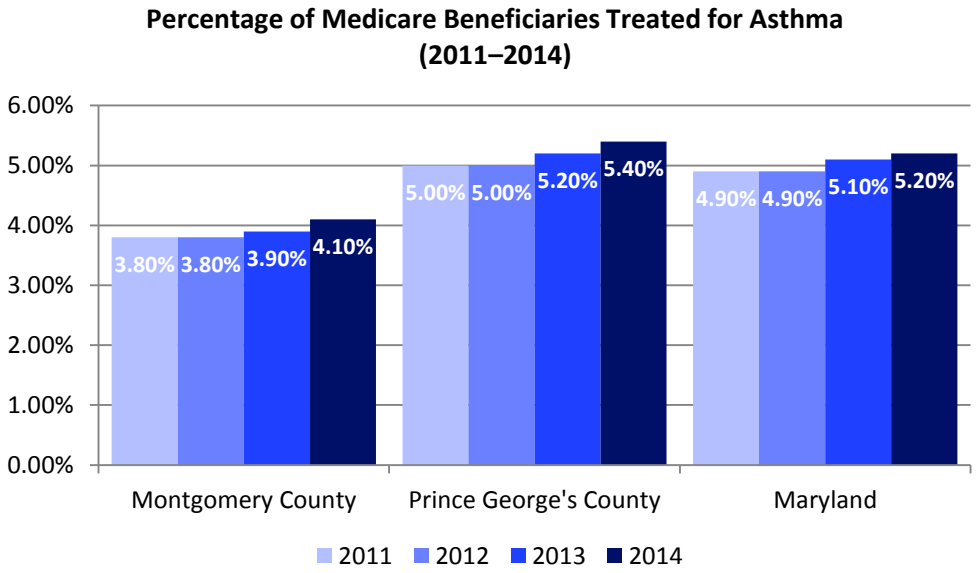


Figure 9. Percentage of Medicare Beneficiaries who were Treated for Asthma in Montgomery County, Prince George's County, and Maryland, 2011–2014.

(Sources: Healthy Montgomery & PGC Health Zone, 2014)

Community Resources

Asthma is a serious public health problem disproportionately affecting low-income and minority children, and there are some efforts by local health providers and health departments to educate and provide support for this issue:

- Information and educational materials are provided to parents from Prince George's County Public Schools.
- Washington Adventist Hospital offers respiratory services such as pulmonary function screenings at community events.
- Montgomery County has established The Asthma Management Program, which focuses on Latino children. This intervention program provides education, support and follow-up care.
- Adventist HealthCare (AHC) partners with various organizations to provide educational services on Asthma. AHC and Montgomery AIR coalition offer lung function screenings and AHC works with the American Lung Association to sponsor the fall Asthma Walk in Wheaton Regional Park.
- The American Lung Association of Maryland Asthma Camp offers a one week camp program (Camp Superkids) to help kids how to manage their asthma, increase their confidence to manage their asthma and provides them with the knowledge to make positive health choices.
- Governor's Wellmobile provides asthma care for uninsured adults and children in a mobile unit managed by the University Of Maryland School Of Nursing.
- Montgomery Asthma Improvement Resources Coalition (Montgomery AIR) is dedicated to improving asthma management in Montgomery County with the foals of reducing the rate of hospitalizations due to childhood asthma and improving awareness about asthma management to health care providers and the public.
- Other resources include: the American Lung Association in Maryland, Asthma and Allergy Foundation of America (Maryland chapter), and the Maryland Asthma Control Program.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 8: Influenza

Influenza

KEY FINDINGS

- Mortality due to influenza and its complications is decreasing across the state of Maryland.

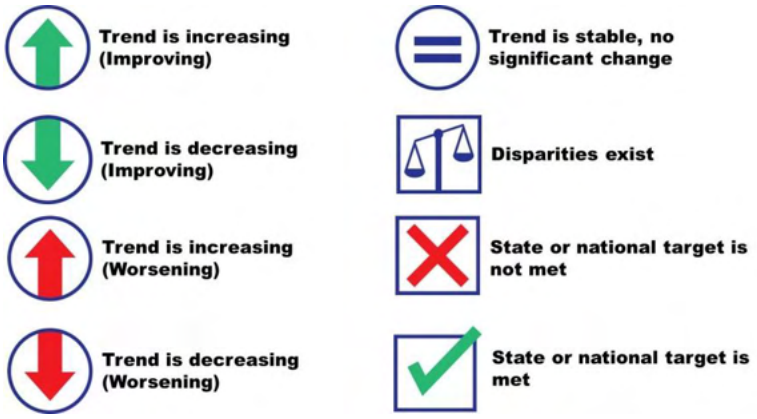
- Blacks across the state of Maryland have higher mortality rates due to influenza and its complications than whites.

- There has been an increase in the number of people receiving flu vaccinations across Montgomery County, Prince George's County and the state of Maryland.

- Neither Montgomery County nor Prince George's County meet the Healthy People 2020 or SHIP 2017 targets for vaccination rates.

- Whites in Montgomery County, Prince George's County and Maryland were vaccinated against the flu virus at higher rates than Blacks.

- In Montgomery County, Blacks visit the ER at a much higher rate than whites for issues related to flu. Asians have the lowest ER utilization rate for issues related to flu.



Influenza

Impact

Influenza is a viral, contagious disease that can lead to complications resulting in pneumonia, a severe infection of the lungs. According to the Maryland Vital Statistics Administration, influenza is the eighth leading cause of death in the state of Maryland at 15.5 deaths per 100,000.[1] Influenza poses a serious threat to the immunocompromised, the very young, and the elderly.[2] Annual flu vaccinations help to strengthen the immune system against the influenza virus.

Mortality

Maryland Vital Statistics Administration reports that deaths due to influenza and pneumonia in the state have decreased by 30 percent since 2005 (Figure 1). Over the past decade, the death rates for the total population and the white population in Maryland have been similar. In comparison, the death rate for Blacks has been higher than that of whites or the total population since 2009.

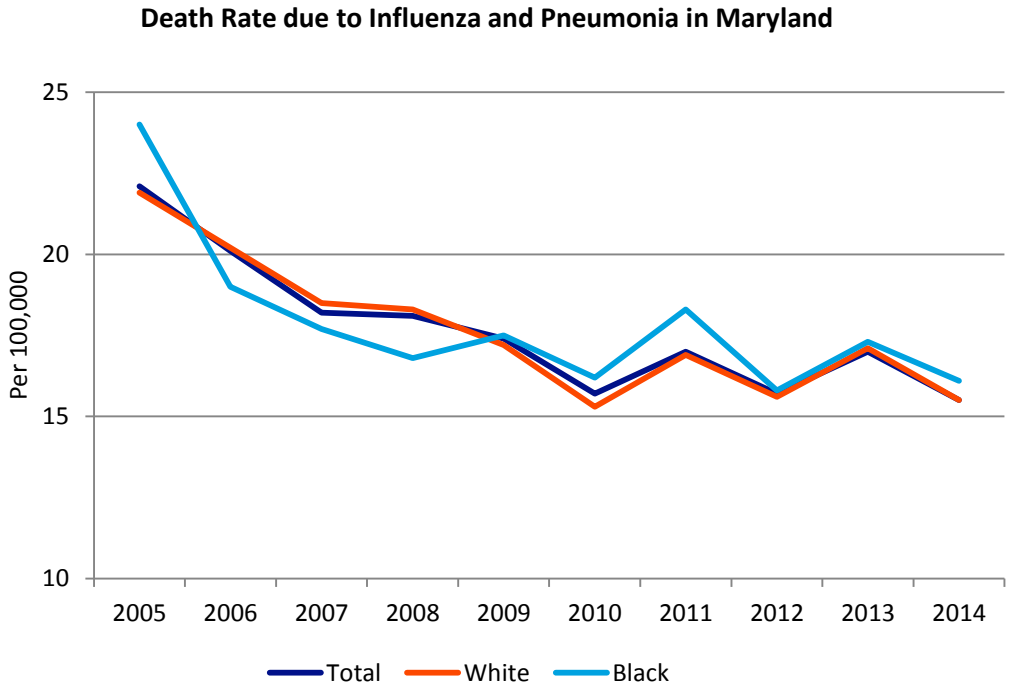


Figure 1. Death Rate due to Influenza and Pneumonia in Maryland, 2005-2014
(Source: Maryland Department of Health and Mental Hygiene (DHMH), 2014)

At the county level, the death rate due to influenza and complications from pneumonia is lower in Montgomery County than in Prince George's County (Figure 2). Both Montgomery and Prince George's Counties' rates are lower than the current state death rate of 15.5 per 100,000.[3]

[1] Department of Health and Mental Hygiene (DHMH). (2016). Maryland vital statistics annual report 2014. Retrieved from: http://dhmh.maryland.gov/vsa/Pages/reports.aspx

[2] Healthy Communities Institute. (2016). Age-adjusted death rate due to influenza and pneumonia. *Healthy Montgomery.* Retrieved from: http://www.healthymontgomery.org/index.php?module=indicators&controller=index&action=view&indicatorId=110&localeId=1259

[3] DHMH. (2016). Maryland vital statistics annual report 2014. Retrieved from: http://dhmh.maryland.gov/vsa/Pages/reports.aspx

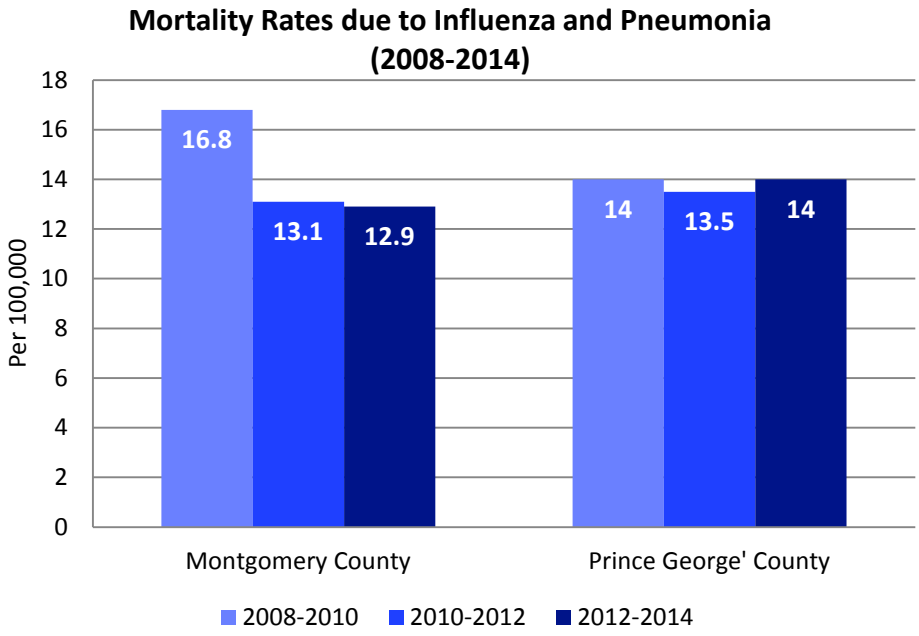


Figure 2. Mortality Rates due to Influenza and Pneumonia in Montgomery County and Prince George's County, 2008–2014
(Sources: Healthy Montgomery and PGC Health Zone, 2014)

Incidence/Prevalence

The 2014–2015 influenza season was more severe than recent flu seasons.[4] Maryland residents over the age of 65 were most affected by the 2014–2015 flu season, accounting for nearly 62.0 percent of the influenza-related hospitalizations across the state.

The percentage of people that are annually vaccinated has increased from 2012 to 2013 at both the county and state levels (Figure 3). Montgomery County has higher vaccination rates than both Prince George's County and the state. Despite the rise in vaccinations, neither Montgomery County nor the state of Maryland met the SHIP 2017 target of 49.1 percent or the HP 2020 target of 70.0 percent.

[4] DHMH – Division of Infectious Disease Surveillance. (2015). Influenza in Maryland: 2014-2015 Season report. *DHMH FluWatch.* Retrieved from: http://phpa.dhmh.maryland.gov/influenza/fluwatch/Shared%20Documents/Season%20Summary%202014-2015_FINAL.pdf

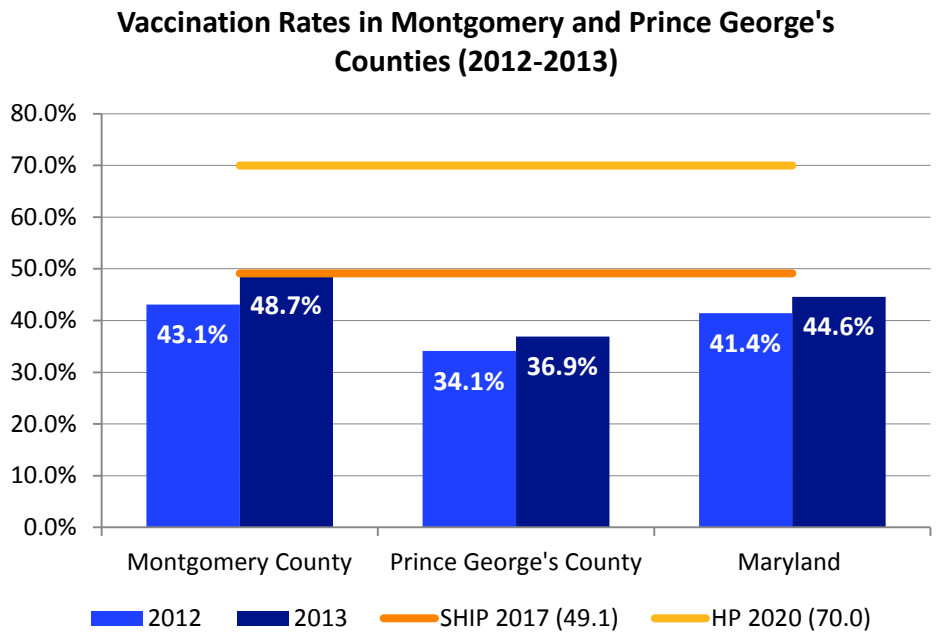


Figure 3. Vaccination Rates in Montgomery County, Prince George's County and Maryland, 2012-2013
(Source: DHMH - State Health Improvement Process (SHIP), 2013)

In 2014, 62.6 percent of seniors aged 65 and over in Montgomery County and 59.7 percent of Prince George's County seniors were vaccinated against the flu (Figure 4). Seniors in both counties met the state target of 49.1 percent vaccination rates, but fell short of the national target of 70.0 percent. Seniors may be more susceptible to the flu and ensuing complications so it is important to reach the non-vaccinated senior population.

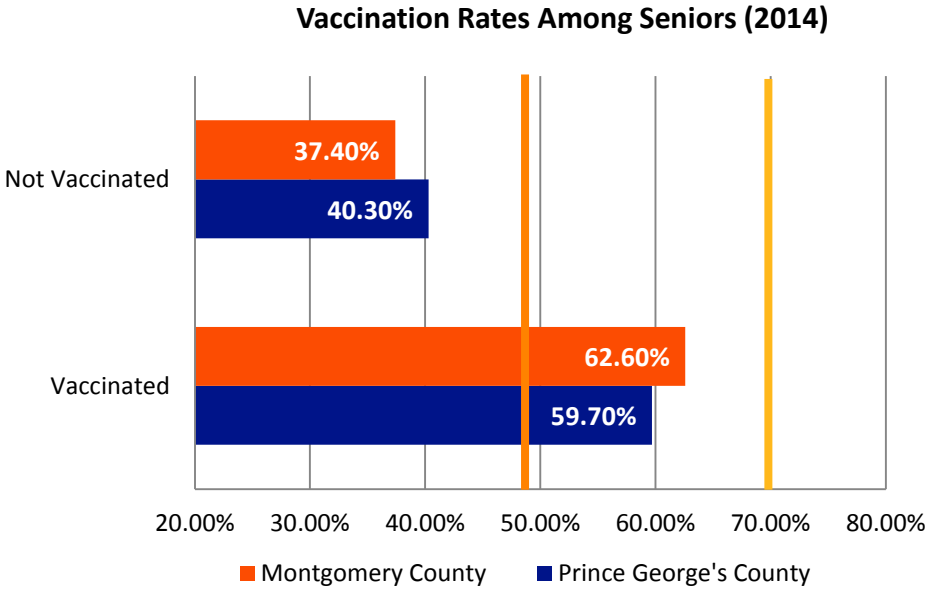


Figure 4. Percentage of Vaccinations among Seniors in Montgomery and Prince George's County, 2014
(Sources: Healthy Montgomery, PGC Health Zone, 2014)

Across Montgomery County, Prince George's County and the state, whites are the most vaccinated population (Figure 5). Blacks were vaccinated at similar rates across the two counties and the state. Specifically looking at the white population, those in Montgomery County were vaccinated at a much higher rate than those in Prince George's County or the state. In fact, while white residents of Montgomery County and Maryland met the state target 49.1 percent vaccinated population, Prince George's County fell short of the target.

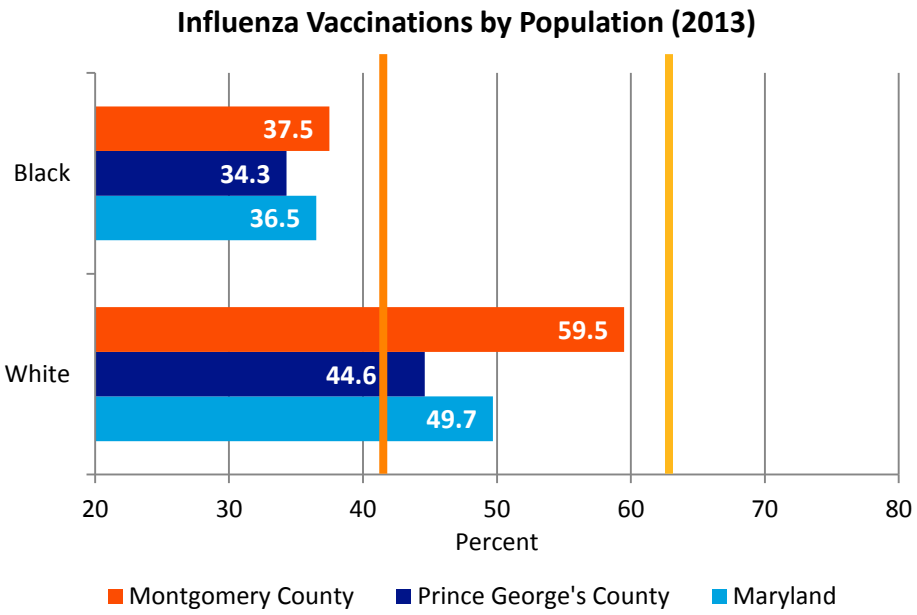


Figure 5. Influenza Vaccination Rates in Montgomery County, Prince George's County and Maryland by Race and Ethnicity, 2013
(Source: DHMH - SHIP, 2013)

Looking at vaccination rates by race and ethnicity is important when considering the emergency room visits related to influenza and pneumonia. As seen in Figure 6 below, Blacks in Montgomery County utilize the ER at the highest rate with issues related to flu or pneumonia. Blacks visit the ER at a rate approximately three times higher than their white counterparts for flu related issues. Asians have the lowest ER utilization rate.

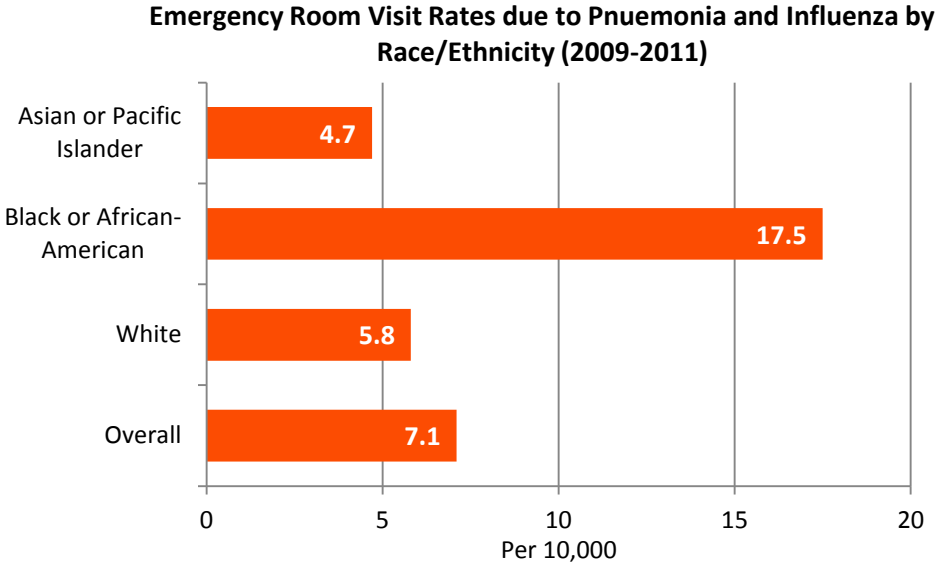


Figure 6. Emergency Room Visit Rates due to Pneumonia and Influenza in Montgomery County by Race/Ethnicity
(Source: Healthy Montgomery, 2013)

When broken down into age groups, 18- to 19- year old residents of Montgomery County visit the emergency room more frequently than any other age group for illnesses related to influenza and pneumonia. This is followed by the 20- to 24- year olds and the 25- to 44- year olds (Figure 7).

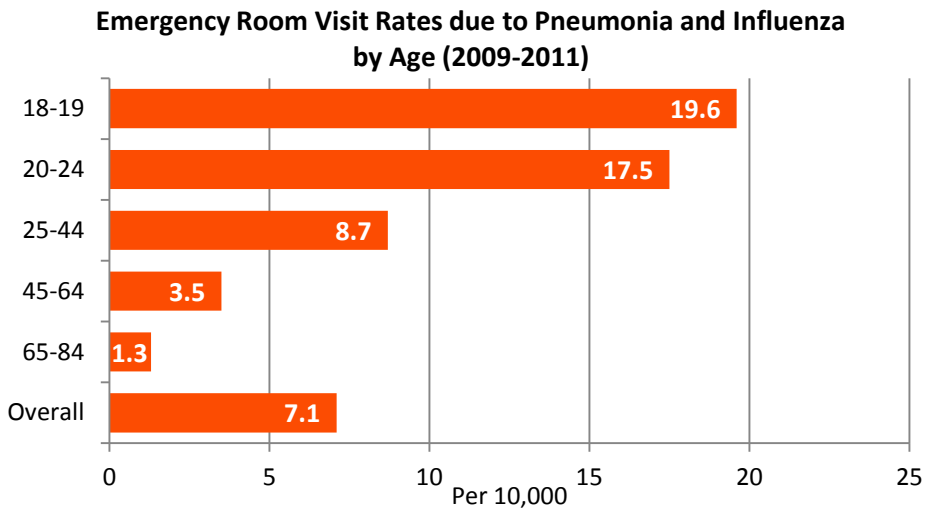


Figure 7. Emergency Room Visit Rates due to Pneumonia and Influenza in Montgomery County by Age
(Source: Healthy Montgomery, 2013)

Community Resources

Immunization against the influenza is widely available in Washington Adventist Hospital's Community Benefit Service Area:

- Washington Adventist Hospital offers annual flu shot clinics in the Montgomery County and Prince George's County area beginning in early September and continuing through January. Flu shot clinics are held in community centers, congregations, subsidized apartment complexes, and at Washington Adventist Hospital.
- Other health care providers, physician offices, local pharmacies, and clinics also provide flu vaccinations.
- Prince George's County Health Department offers free flu vaccinations to children 6 months and older every fall at the start of flu season. The PGC Health Department website lists the schedule for Flu Vaccinations in the county in both English and Spanish.
- Montgomery County Health Department has immunization outreach and education services to county residents. An annual campaign is offered to residents which includes a Flu Information Line and a "Stay at Home Toolkit."

Section IV: Findings

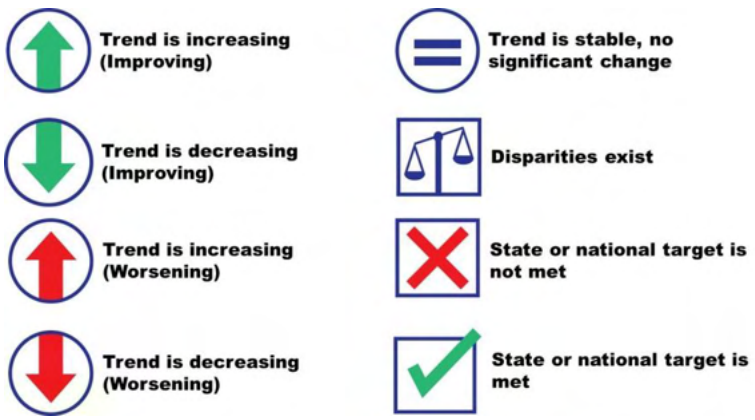
Part B:
Secondary Data Findings

Chapter 9: HIV/AIDS

HIV/AIDS

KEY FINDINGS

- In 2014, Maryland was nationally ranked the fourth highest in estimated HIV diagnosis rates and ninth in total number of AIDS cases.
- Males constitute 71.0 percent of the population affected by HIV/AIDS in Maryland. The most at risk population is men who have sex with men, particularly Black men who have sex with men.
- The age group most affected by the disease at both state and national levels is the 25–34 year olds.
- Black residents have the highest HIV incidence rates in Montgomery County, Prince George's County and Maryland overall.
- In Maryland, Blacks make up an astonishing 75.3 percent of the population affected by HIV/AIDS while whites make up 14.5 percent.
- Prince George's County, at an HIV incidence rate of 48.8 per 100,000, does not meet the SHIP target of 26.7 per 100,000.
- In Montgomery County, the mortality rate due to HIV has decreased over the past few years.
- Montgomery County, and at 1.4 deaths per 100,000, is far below the HP 2020 target of 3.3 deaths per 100,000.



HIV/AIDS

Impact

Human immunodeficiency virus (HIV) attacks one's immune system by destroying CD4 cells that help in fighting off infections and diseases.[1] HIV infection can progressively worsen in stages until it becomes acquired immunodeficiency syndrome (AIDS), the most severe phase of HIV infection. HIV can be transmitted through sexual behaviors and needle/syringe use. In 2014, the state of Maryland was nationally ranked fourth highest in estimated HIV diagnosis rates and ninth in total number of AIDS cases.[2] While HIV/AIDS affects people of all races, ethnicities, genders, and sexual orientations, the most at risk population is men who have sex with men, particularly Black men who have sex with men. While HIV can be controlled through treatment, there is no cure for it yet.[3]

HIV/AIDS at State Level

According to the Maryland Department of Health and Mental Hygiene (DHMH) HIV Progress Report, there were about 1,235 new HIV diagnoses and 409 deaths due to AIDS in Maryland by the end of 2013 (Table 1). Overall, males constitute 71.0 percent of the population affected by HIV/AIDS in Maryland, while females make up 29.0 percent (Figure 1).[4]

	Maryland	U.S.
HIV Diagnoses	1,235	40,493
Living HIV/AIDS Cases	30,958	949,331
Living AIDS Cases	16,790	526,172
Reported AIDS Deaths	409	11,964

Table 1. HIV/AIDS Data, 2014
(Source: Maryland HIV Progress Report, June 2016)

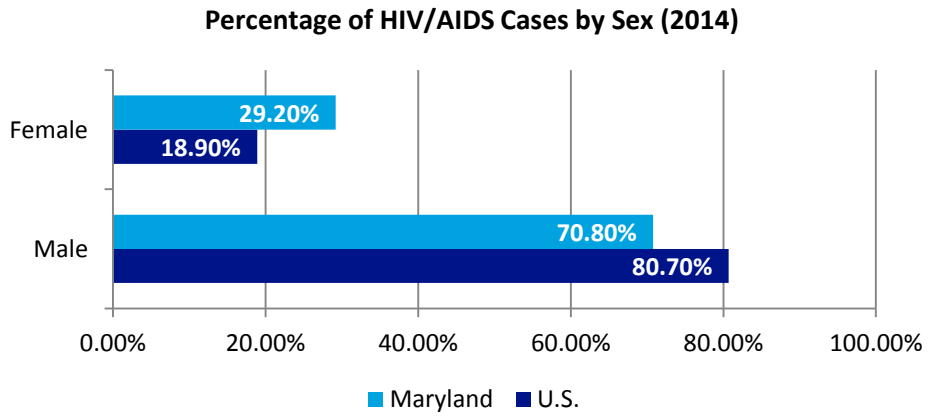


Figure 1. Percentage of HIV/AIDS cases in Maryland and the U.S. by Sex, 2014
(Source: Maryland HIV Progress Report, June 2016)

[1] CDC. (2016). About HIV/AIDS. Retrieved from: http://www.cdc.gov/hiv/basics/whatishiv.html
[2] DHMH – Prevention and Health Promotion Administration, Infectious Disease Epidemiology and Outbreak Response Bureau. (2016). Maryland HIV progress report, June 2016. Retrieved from: http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/SiteAssets/Pages/statistics/Maryland-Progress-Report-2014.pdf
[3] DHMH – Prevention and Health Promotion Administration, Infectious Disease Epidemiology and Outbreak Response Bureau. (2016). Maryland HIV progress report, June 2016. Retrieved from: http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/SiteAssets/Pages/statistics/Maryland-Progress-Report-2014.pdf
[4] DHMH. (2015). Maryland HIV progress report, October 2015. Retrieved from: http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/SiteAssets/Pages/statistics/Maryland%20HIV%20Progress%20Report%202013.pdf

Analysis of the HIV/AIDS rate by age groups shows that the Maryland state rates are comparable to national rates (Figure 1). The age group most affected by the disease at both state and national levels is the 25–34 year olds, while the least affected group is seniors over the age of 65 years (Figure 2).

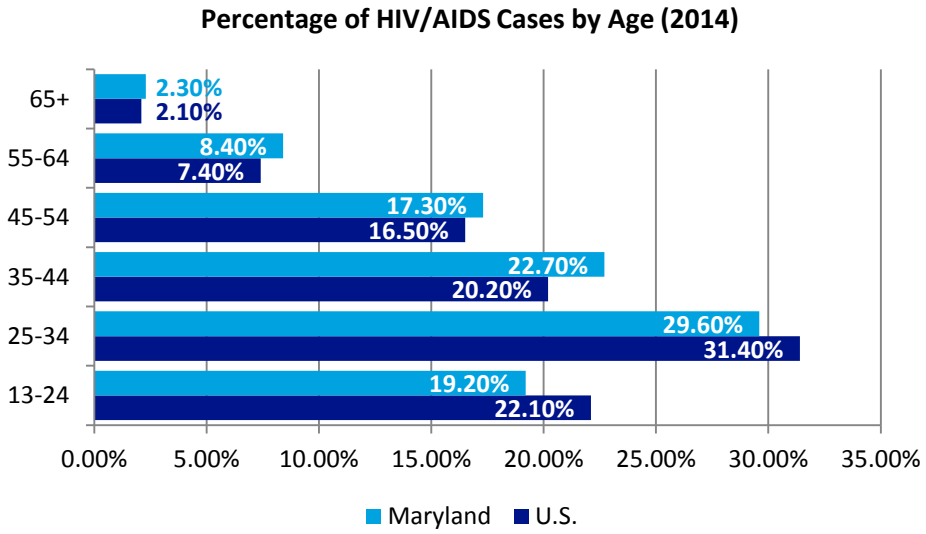


Figure 2. Percentage of HIV/AIDS Cases in Maryland and the U.S. by Age, 2014
(Source: Maryland HIV Progress Report, June 2016)

Stratifying the data by race and ethnicity, however, highlights the disparities between the different racial groups. By the end of 2012, Black females were 15.7 times more likely to be living with HIV than white females and Black males were 8.2 times more likely to be living with HIV than white males (Figure 3).[5] Latina females were 2.9 times more likely than white females to be living with HIV while Latino males were 2.2 times more likely than white males. More recent data shows that Blacks continue to be the most disproportionately affected group at both state and national levels, followed by whites (Figure 4). In Maryland, Blacks make up an astonishing 75.3 percent of the population affected by HIV/AIDS while whites make up 14.5 percent.[6] Whereas the state and national data were comparable for age groups, the data is no longer comparable in terms of race and ethnicity.

[5] AIDSVu. (n.d.) Maryland. Retrieved from: http://aidsvu.org/state/maryland/
[6] DHMH – Center for HIV Surveillance, Epidemiology and Evaluation, Prevention and Health Promotion Administration. (2016). Race/ethnicity and HIV in Maryland, 2014. Retrieved from: http://phpa.dhmh.maryland.gov/OIDEOR/CHSE/Pages/statistics.aspx

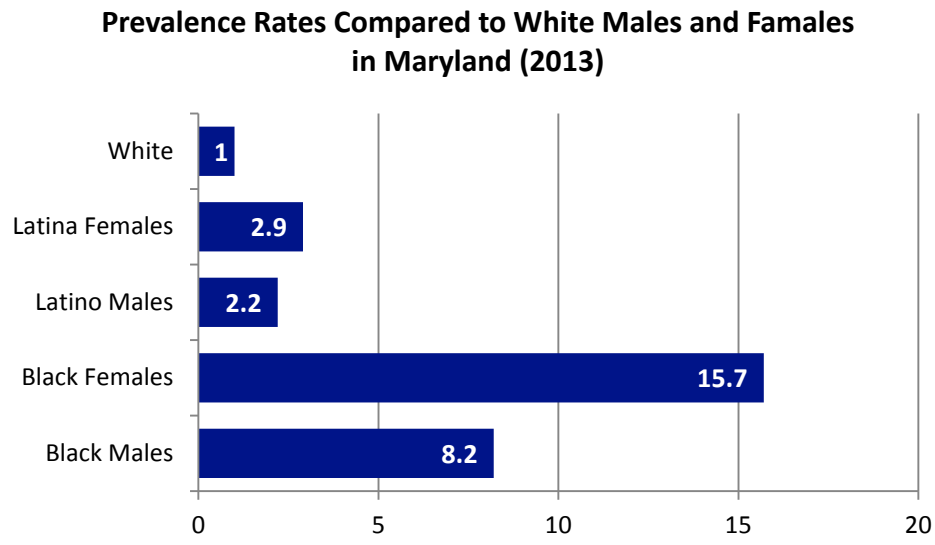


Figure 3. HIV/AIDS Prevalence Rates Compared to White Males and Females in Maryland, 2013
(Source: AIDSVu, Maryland, 2013)

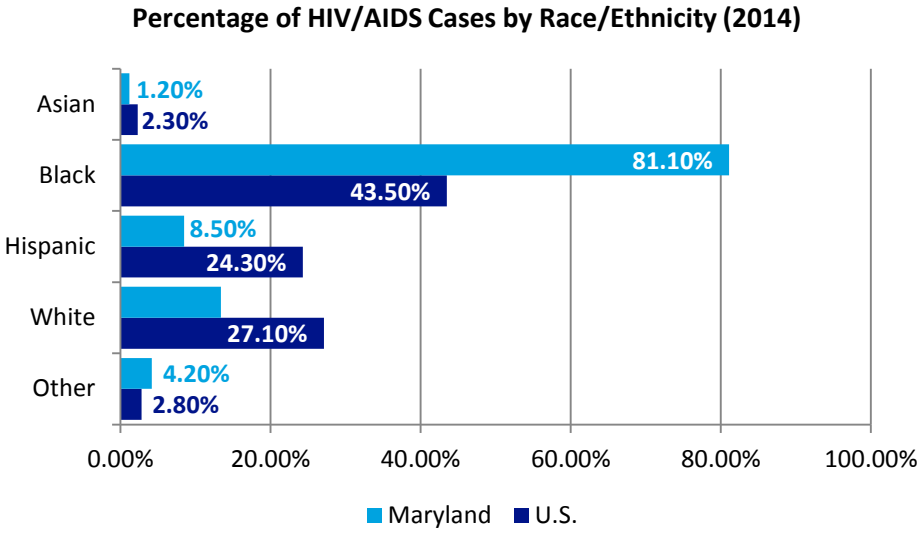


Figure 4. HIV/AIDS Data by Race and Ethnicity, 2014
(Source: Maryland HIV Progress Report, June 2016)

HIV transmission can occur through sexual contact and/or needles/syringes where bodily fluid is exchanged. AIDSVu categorized HIV transmission for males (Figure 5) and females (Figure 6) living with HIV diagnosis by transmission category. The majority of Maryland males living with HIV contracted the infection through male to male sexual contact. The second largest group of males living with HIV got the infection due to injection drug use, followed in third by heterosexual contact. For females, the majority of those living with HIV contracted it through heterosexual contact, followed by injection drug use (Figure 6).

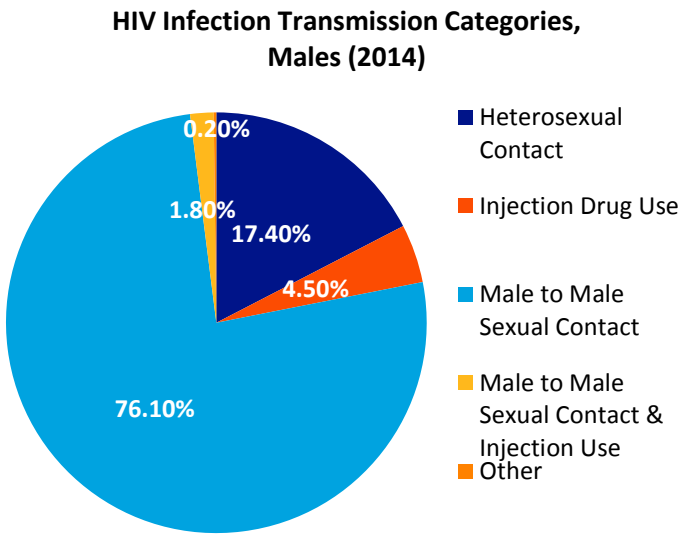


Figure 5. HIV Infection Transmission Categories for Males Living in Maryland, 2014
(Source: AIDSVu, Maryland, 2013)

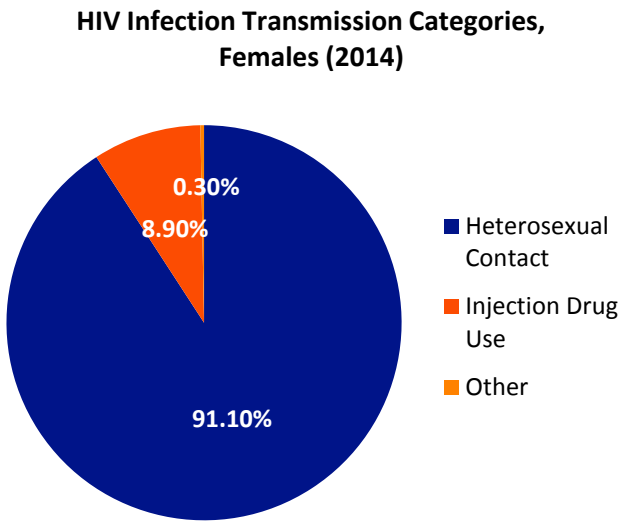


Figure 6. HIV Infection Transmission Categories for Females Living in Maryland, 2014
(Source: AIDSVu, Maryland, 2013)

The CDC reports that gay and bisexual men are more severely affected by HIV than any other group. Furthermore, among gay and bisexual men, Black gay and bisexual men are the most disproportionately affected by the disease. This is true for Maryland as well (Figure 7). Black men who have sex with men are the most at risk for HIV/AIDS, followed by Black females engaging in heterosexual activities and Black males engaging in heterosexual activities (Figure 7).

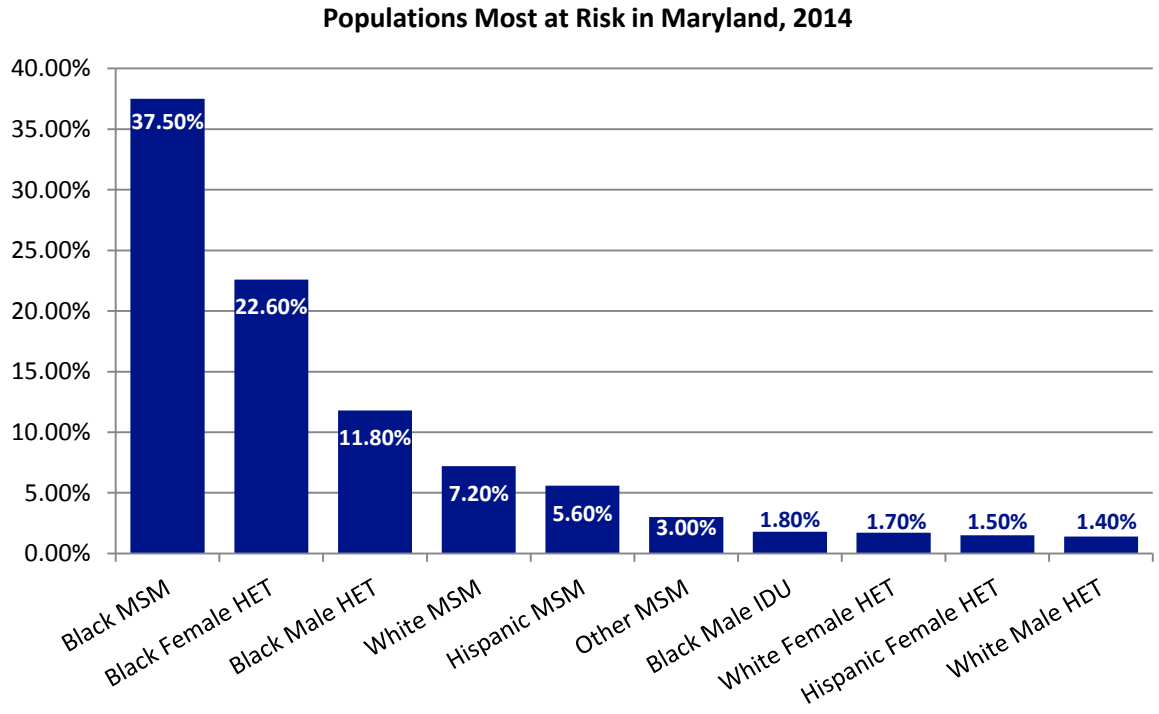


Figure 7. Populations Most at Risk for HIV/AIDS in Maryland, 2014
(Source: Maryland HIV Progress Report, June 2016)
(Note: MSM = men who have sex with men, HET = heterosexual exposure, IDU = injection drug user)

HIV/AIDS at County Level

Compared to the state overall, Montgomery County has a lower rate of adolescents over the age of 13 years and adults diagnosed with HIV while Prince George's County has higher rates (Figure 8). Montgomery County, at 21.9 HIV cases per 100,000, met the SHIP target of 26.7 HIV cases per 100,000. Not only does Prince George's County not meet the SHIP target but it also has a much higher HIV incidence rate than Montgomery County at 48.8 per 100,000. While Montgomery County overall meets the target, stratifying the data by race and ethnicity shows that Blacks in the county have the highest rates of HIV diagnoses at 61.4 per 100,000, whereas the rate amongst Hispanics is 27 per 100,000 and whites 9.7 per 100,000. This pattern holds true for Prince George's County, where Black residents have the highest HIV incidence rates at 62.7 per 100,000. It is worth noting that both Hispanics and whites in Prince George's County have a higher HIV incidence rate than Hispanics and whites in Montgomery County (Figure 8).

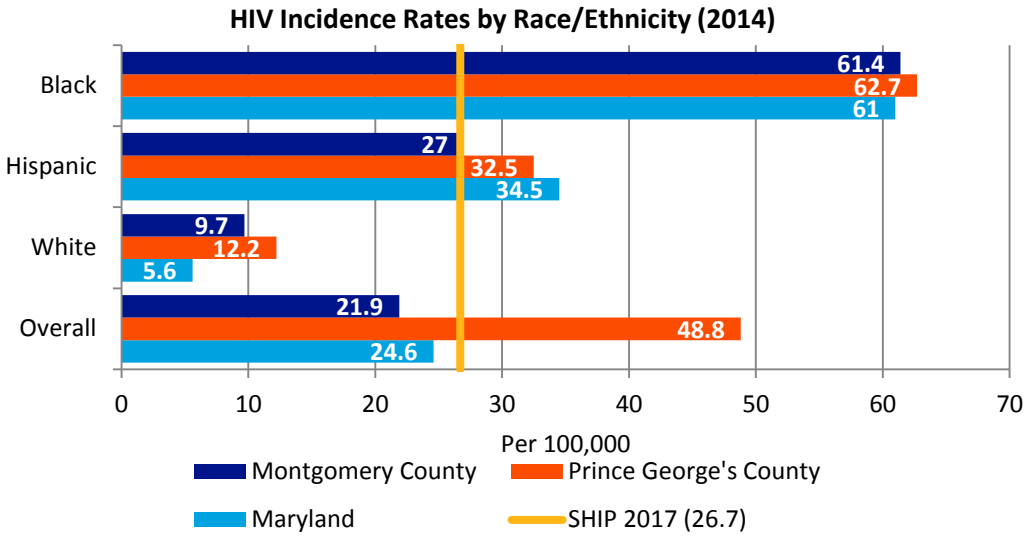


Figure 8. HIV Incidence Rates in Montgomery and Prince George's Counties, 2014
(Source: DHMH - Maryland State Health Improvement Process (SHIP), 2014)

At the end of 2013, the rate of people living with HIV diagnosis was higher in Prince George's County than Montgomery County (Figure 9). Whereas 462 people per 100,000 were living with HIV diagnosis in Montgomery County, the rate was almost double at 883 per 100,000 in Prince George's County. Montgomery County had a lower rate than the state of Maryland, while Prince George's had a higher rate.

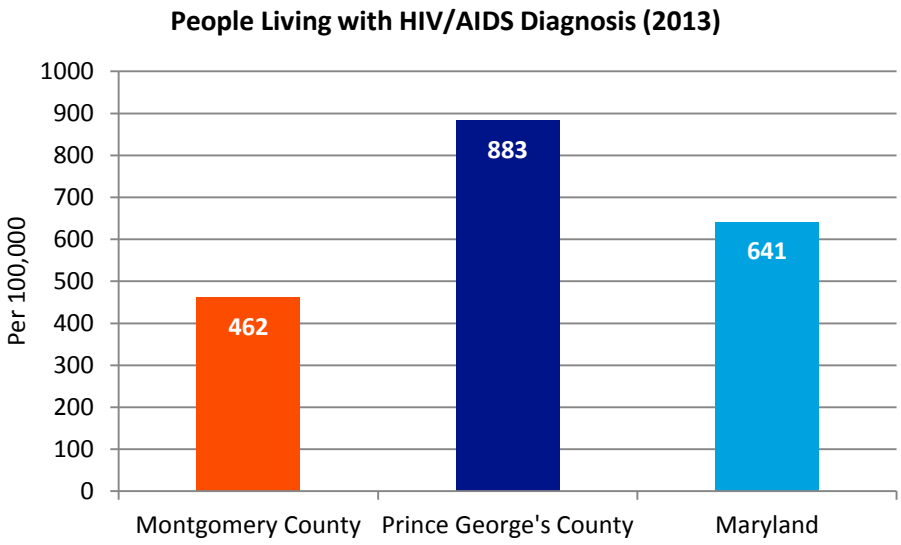


Figure 9. The Rate of People Living with HIV Diagnosis in Montgomery County, Prince George's County and Maryland, 2013 (Source: AIDSVu, Maryland, 2013)

The number of Black people living with HIV at the end of 2013 was 2,398 in Montgomery County and 5,553 in Prince George's County (Figure 10). Both Montgomery County (1,061 cases) and Prince George's County (1,603 cases) shad the highest number of HIV cases among residents aged 35–44 years old (Figure 11). Males constituted most of the population affected by HIV, in both Montgomery and Prince George's County (Figure 12). In the year 2014, 227 Montgomery County and 354 Prince George's County residents were newly diagnosed with HIV (Figure 13).

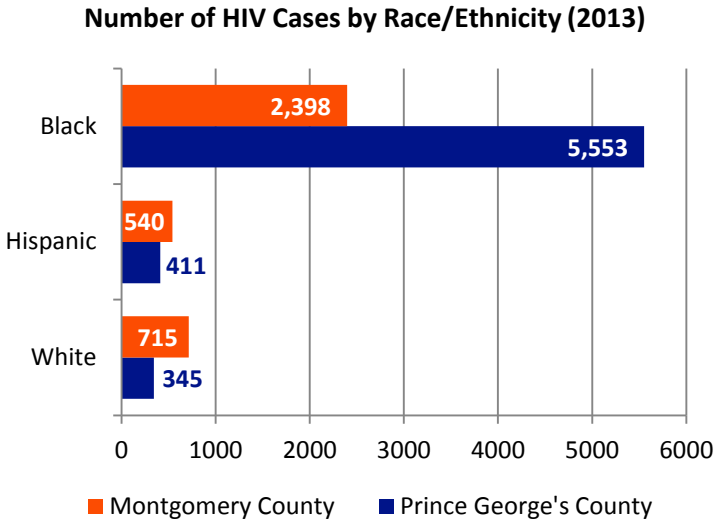


Figure 10. Number of People Living with HIV by Race/Ethnicity, 2013
(Source: AIDSVu, Maryland, 2013)

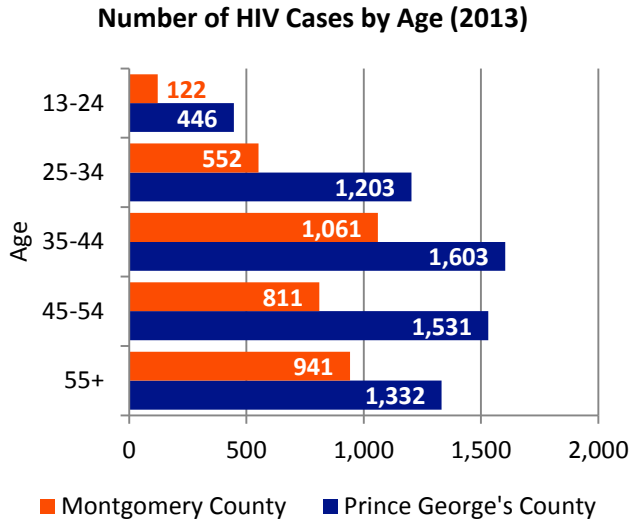


Figure 11. Number of People Living with HIV Age, 2013
(Source: AIDSVu, Maryland, 2013)

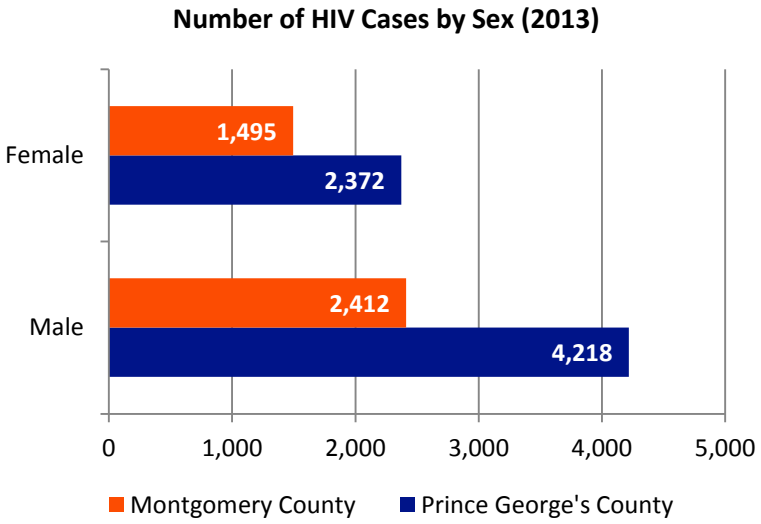


Figure 12. Number of People Living with HIV by Sex, 2013
(Source: AIDSVu, Maryland, 2013)

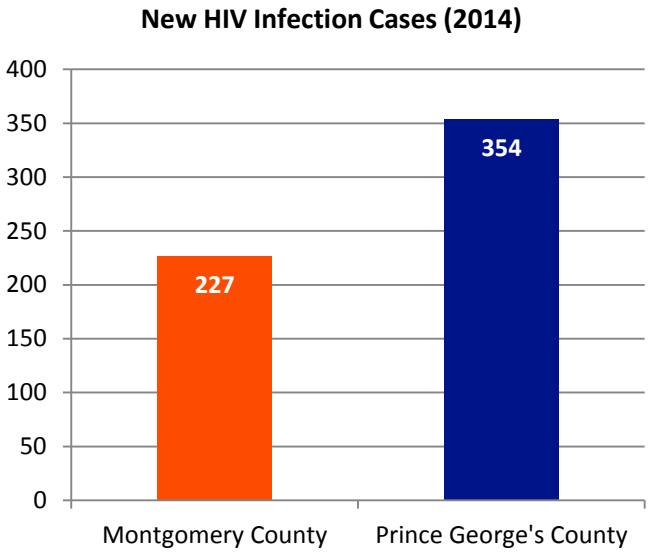


Figure 13. New HIV Infection Diagnoses in 2014
(Source: AIDSVu, Maryland, 2013)

Community Resources

Treatment and support for those with HIV or AIDS is provided by both private and public health care providers:

- Prince George's County Health Department provides testing in various locations throughout the county. This includes a health assessment, physical exam and lab tests. Case Management services are also provided. The case management includes such assistance as health education, emergency financial assistance, transportation, medicine assistance, and referrals.
- Montgomery County Health Department provides Case Management services. They provide testing, counseling, support groups, dental care and home care services as needed. Education and outreach is also available for at-risk populations.
- The University of Maryland, University Health Center offers testing.
- Whitman Walker Clinic offers a variety of services in multiple locations in Washington Adventist Hospital's Community Benefit Service Area. Services offered include testing, primary care, legal assistance, counseling, and support groups.
- HIV/AIDS Program (HAP) is a program offered by Prince George's County which offers comprehensive medical care to uninsured or underinsured persons in PG County living with HIV/AIDS. The program also offers anonymous HIV counseling, testing and referrals to the public.
- Heart to Hand is a nonprofit organization in Largo, MD that offers non-medical support to people living with HIV/AIDS and other health disparities. Some of the services include screenings in a certified HIV testing site, linkage to care for newly diagnosed people with HIV/AIDS, support groups and case management.
- Maryland AIDS Administration educates public and health care professionals.
- Through Metropolitan Housing Access Program (MHAP), Housing Counseling Services, Inc. (HCS)is able to provide financial and housing assistance to individuals living with HIV/AIDS.
- "Maryland is Greater Than AIDS" is a partnership between The Montgomery County African American Health Program and a local Walgreen's Pharmacy in Rockville to offer FREE HIV testing.
- Gettested.cdc.gov is a website that makes it easy to find free, fast and confidential testing sites near you.
- Pre-exposure prophylaxis (PrEP) is a prevention medication given to people who do not have HIV but are at a very high risk of getting it. There are currently two providers in Montgomery County who can offer more information and prescribe this medication.

Section IV: Findings

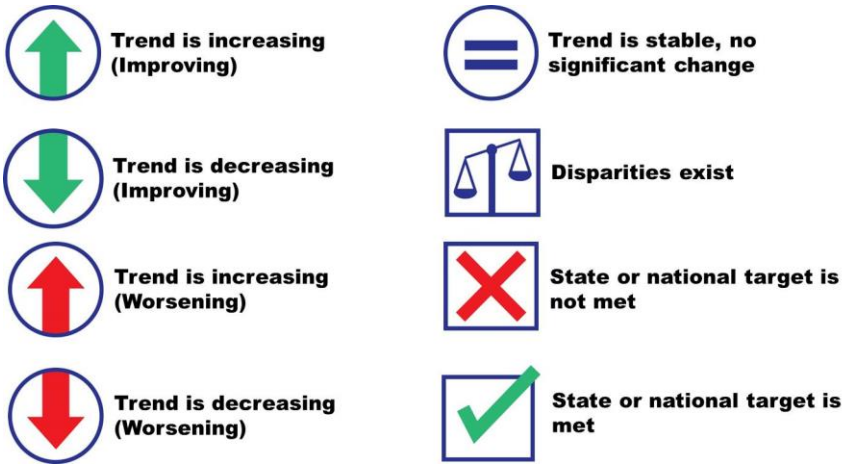
Part B:
Secondary Data Findings

Chapter 10:
Social Determinants of Health

Social Determinants of Health

KEY FINDINGS

- The 4-year high school graduation rate of Montgomery County is higher than the state average and HP 2020 target, but falls short of the SHIP 2-17 target of 95 percent.
- The 4-year high school graduation rate of Prince George's County is lower than the state average and the targeted goals.
- The lowest 4-year high school graduation rates are among American Indians/Alaskan Native and Hispanics in Prince George's County, Blacks in Montgomery County, and Hispanics across the state of Maryland.
- When it comes to college level education, Hispanics are least likely to have Bachelor's degree or higher across Montgomery County, Prince George's County and Maryland.
- Hispanic children are the least ready to learn when entering kindergarten in both counties.
- Hispanics are the least likely to consume five or more servings of fruits and vegetables in Montgomery County.
- Prince George's County, at 15.5 percent, has a higher percentage of people living in food deserts than Montgomery County (7 percent) or Maryland (12.7 percent).
- There are 981 people experiencing homelessness in Montgomery County and 544 in Prince George's County. Many of these individuals have severe mental illnesses, struggle with substance abuse, have many chronic problems, and have physical disability.
- The pedestrian death rate is higher in Prince George's County (1.7 per 100,000) than in Montgomery County (1.4 per 100,000) or Maryland (0.9 per 100,000).
- Whites in Montgomery County and Blacks in Prince George's County experienced the highest traffic fatalities compared to their racial counterparts.



10.1 Educational Attainment

In 2015, 89.36 percent of Montgomery County students graduated high school within 4 years. The 4 year graduation rate for the county is higher than that of the state (86.98 percent) and surpasses the Healthy People 2020 goal of 82.4 percent, but falls short of the Maryland SHIP target of 95 percent.[1] However, the 4-year high school graduation rate of Prince George's County students at 78.75 percent falls below both the state average and targeted goals.[2]

While the overall 4 year graduation rate in Montgomery County has exceeded national targets, disparities are present among racial and ethnic groups. American Indian/Alaskan Native, Asian and White students in Montgomery County have the highest graduation rates, at around 95 percent, while Hispanic students have the lowest rates at 79.64 percent. In Prince George's County, students who identify as Asian and two or more races have the highest graduation rates, while Hispanics and American Indians/Alaskan Natives have the lowest graduation (Figure 1). Similar patterns can be found when looking at the graduation rates across the state of Maryland.

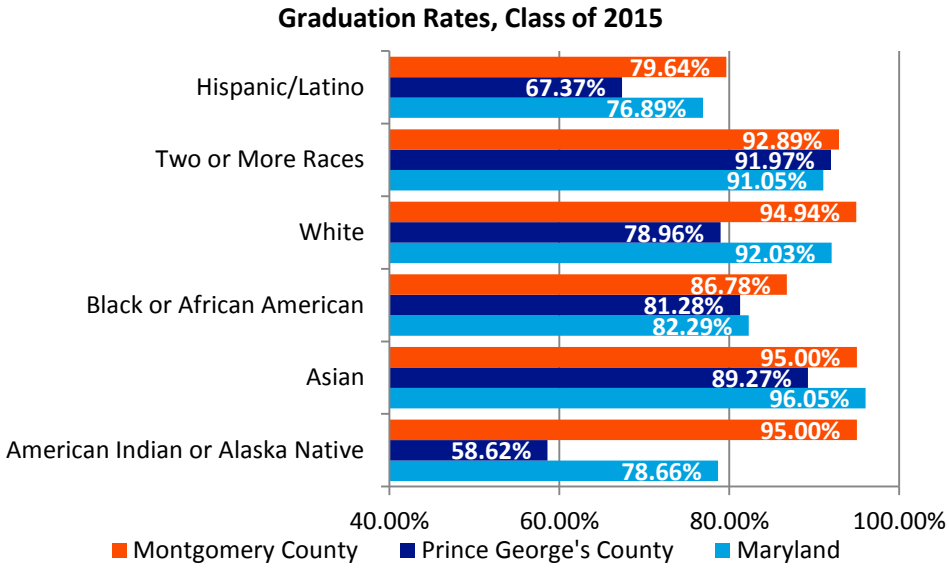


Figure 1. High School Graduation Rates by Race and Ethnicity
(Source: Maryland Report Card, 2016)

Disparities in education by race and ethnicity become even more apparent at the college level. The overall percentage of adults 25+ in Montgomery County with a bachelor's degree or higher is 58.46 percent. However, when stratified by race and ethnicity, the percentage goes as high as 66.29 among Whites and as low as 25.8 among Hispanics (Figure 2). In Prince George's County, the overall percentage of adults 25+ with a bachelor's degree is much lower at only 31 percent. When stratified by race and ethnicity, there are large disparities in Prince George's County as well, with 58.23 percent of Asians obtaining a bachelor's degree compared with 9.65 percent of Hispanics (see Figure 20). This pattern remains for the state of Maryland as well.

[1] Maryland State Department of Education. (2016). 2016 Maryland report card. Retrieved from: www.reportcard.msde.maryland.gov
[2] Maryland State Department of Education. (2016). 2016 Maryland report card. Retrieved from: www.reportcard.msde.maryland.gov

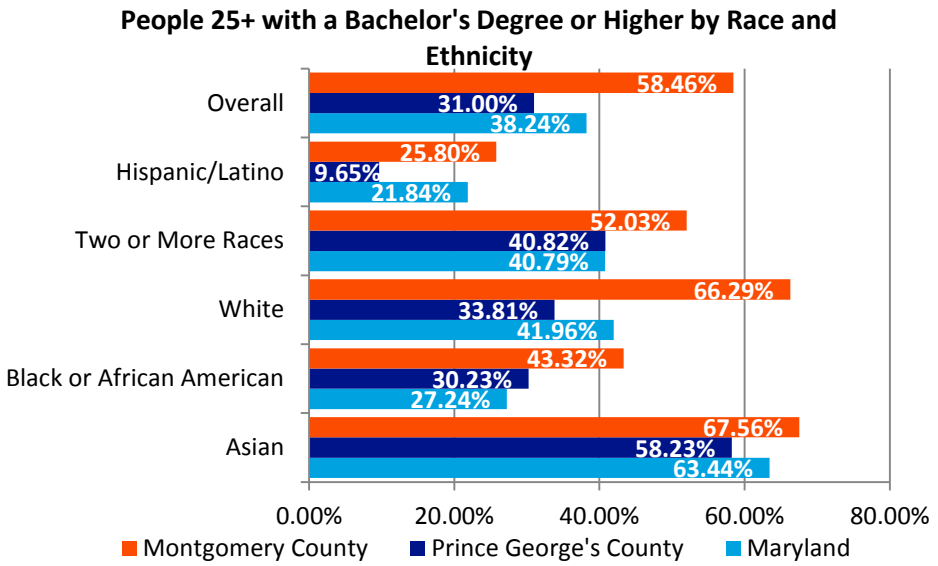


Figure 2. People 25 and over with a Bachelor's Degree or Higher by Race and Ethnicity
(Source: U.S. Census Bureau-American Community Survey, 2014 1-Year ACS Estimates)

Reading & Math Proficiency

Based on results from the Maryland School Assessment, approximately 95 percent of white and 92 percent of Asian and multiracial high school students are proficient in reading compared to 76 percent of Hispanic and 73 percent of American Indian/Alaskan Native students in Montgomery County. In Prince George's County, there are also disparities in reading proficiency among high school students of different races and ethnicities, with multiracial students testing highest at 84.8 percent and Hispanic students testing at 63.8 percent advanced or proficient. In the state of Maryland, students identifying as two or more races test at the highest level of proficiency, while Black students test the lowest (Figure 3).

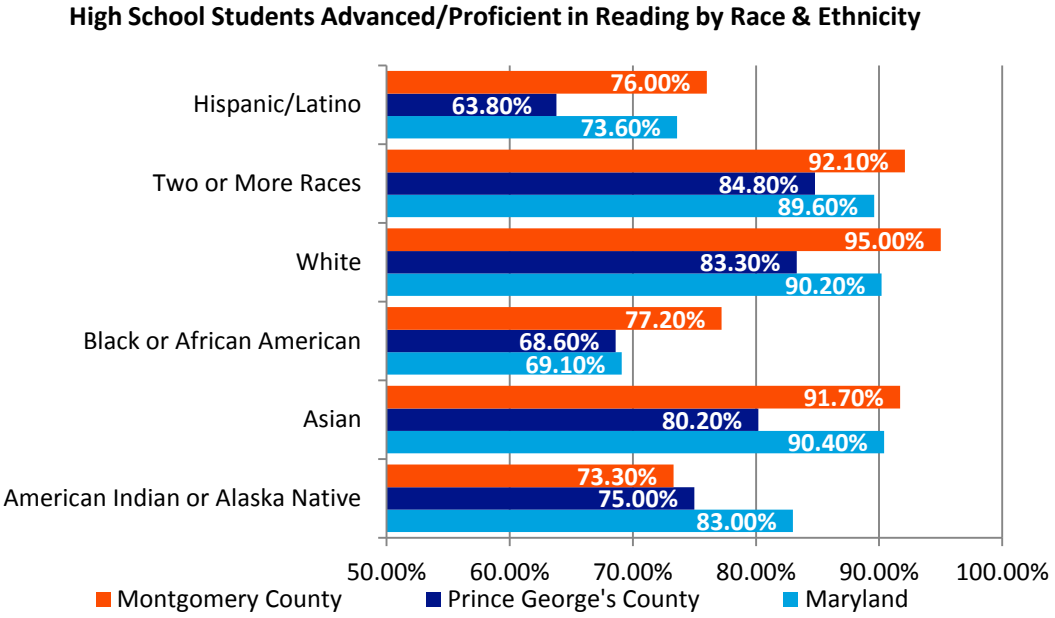


Figure 3. 8th Grade Students Proficiency in Reading by Race and Ethnicity
(Source: Maryland Report Card, 2016)

The same trend can be seen for math proficiency. In Montgomery County, approximately 95 percent of white and Asian high school students are proficient in math compared to only 80.9 percent of Black and 82.9 percent of Hispanic

students. In Prince George's County, around 85 percent of Asian and American Indian or Alaska Native students are proficient in math compared to 67 percent of Hispanic and 65.5 percent of Black students testing the lowest. This trend holds for the state of Maryland overall (Figure 4).

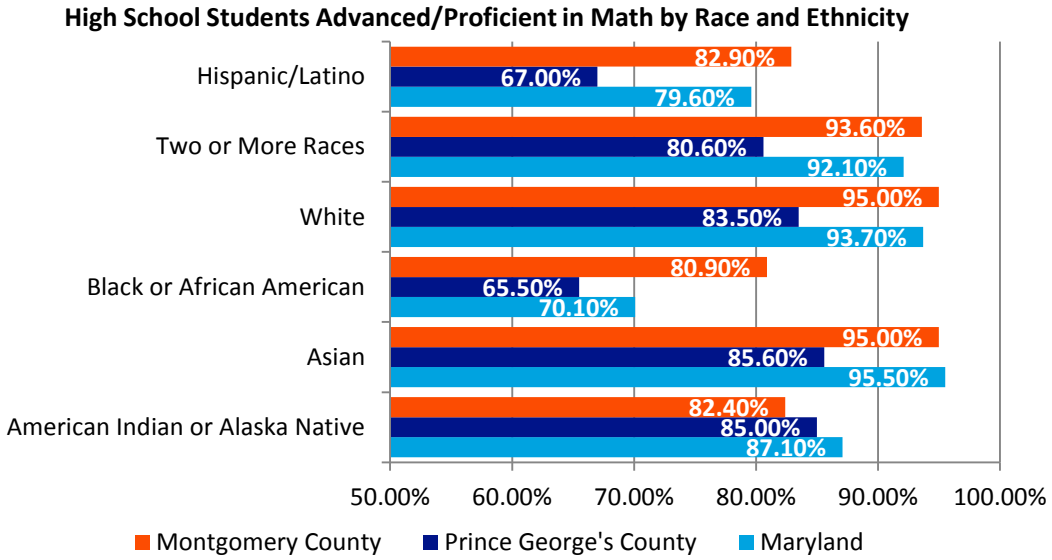


Figure 4. 8th Grade Students Proficiency in Math by Race and Ethnicity
(Source: Maryland Report Card, 2016)

Readiness for Kindergarten

The percentage of children who enter kindergarten ready to learn in Montgomery County rose in 2013 but remained lower than that of the state overall. Hispanic children were among those least likely to be prepared for kindergarten (71 percent). White (90 percent) and Asian (87 percent) children were among those most prepared to enter Kindergarten in Montgomery County (see Figure 5).

The percentage of children who enter kindergarten ready to learn in Prince George's County increased in 2013 to 80 percent but remained lower than that of the state overall (83 percent). Hispanic children were the least likely to be prepared for kindergarten at 72 percent, while Asian and white children were among those most prepared to enter Kindergarten in Prince George's County at 84 percent and 83 percent, respectively (see Figure 5).

County	SHIP Measure	County 2012-2013 Measure	SHIP 2013-2014 County Update	SHIP 2013-2014 County Update (Race & Ethnicity)	SHIP 2013-2014 Maryland Update	Maryland Target 2017
Prince George's County	Percentage of children who enter kindergarten ready to learn	73%	80%	Asian–84%; AA-83% Hispanic-72% White-83%	83%	85.5%
Montgomery County		80%	81%	Asian–87%; AA-78% Hispanic-71% White-90%		

Figure 5. Percentage of Children Entering Kindergarten Ready to Learn,
(Source: SHIP, 2014)

Community Resources

Locally, community groups work to reduce the influence of educational disparities by offering supplemental education programs for all ages. For elementary school children, the focus is on promoting reading skills and involving the whole family in reading. The Housing Initiative Partnership sponsors a program called Reading Is Fundamental, which funds magazine subscriptions for families to read together. The program also encourages children to use its free library and sponsors summer reading programs.

The Partnership also sponsors an after-school program, where tutors help students with their homework. Parents who do not speak English fluently and have difficulty helping their children with their homework particularly appreciate this program. In August 2010, the Reading Is Fundamental family literacy program reported assisting 20 families with 53 children.

Among teenagers and young adults, educational disparities are often the result of students dropping out of school. Several local programs aim to keep students in school or help them gain their general educational development (GED) degree. The Interagency Coalition to Prevent Adolescent Pregnancy works to reduce teen pregnancy – a common reason teenagers drop out of school. For students who do become pregnant, the program offers GED classes. La Clínica del Pueblo, a DC-based community clinic, also helps clients enroll in GED classes. Local community colleges also play an important role by offering low-cost, higher education opportunities close to home.

For adults in the area, educational outreach efforts focus on improving English proficiency and educating people about maintaining good health. The Housing Initiative Partnership also offers English as a second language (ESL) courses to promote language proficiency for adult residents. La Clínica del Pueblo focuses on health education, like courses on obesity prevention, to empower community members to make healthy choices regardless of their social conditions.

Each of these programs aims to improve the education of the community. These efforts should have a positive impact on health by (1) encouraging additional years of education for the participants; (2) helping participants get better jobs in the long term – with employers who are more understanding of health needs and more likely to offer health insurance; and (3) increasing health literacy and understanding of health improvement.

10.2 Food Access

Healthy Eating Behaviors

In Montgomery County, 66.7 percent of the adult population consumes less than five servings of fruits and vegetables daily. This proportion is lower than the Prince George's County average of 70.7 percent or Maryland's average of 72.4 percent (Figure 1).

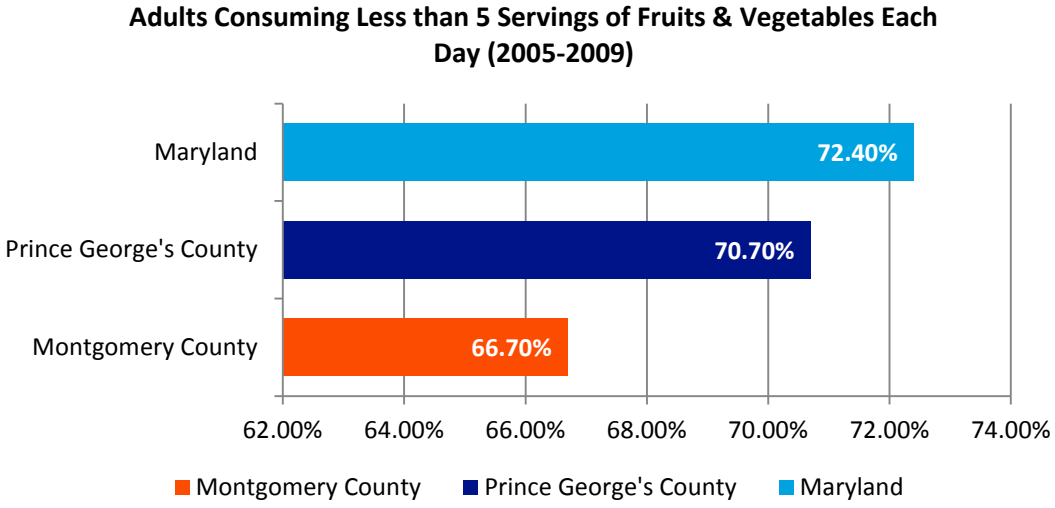


Figure 1. Adults Consuming Less Than 5 Servings of Fruits & Vegetables Each Day
(Source: Community Commons Community Health Needs Assessment, 2013)

In Montgomery County, there are differences in fruit and vegetable consumption among racial and ethnic groups. A higher percentage of white (33 percent) and Asian (31 percent) residents consume five or more servings of fruits and vegetables daily, compared to the county as a whole (29.6 percent). However, only 14.2 percent of the Hispanic residents in the county consume the recommended number of fruit and vegetable servings (Figure 2).

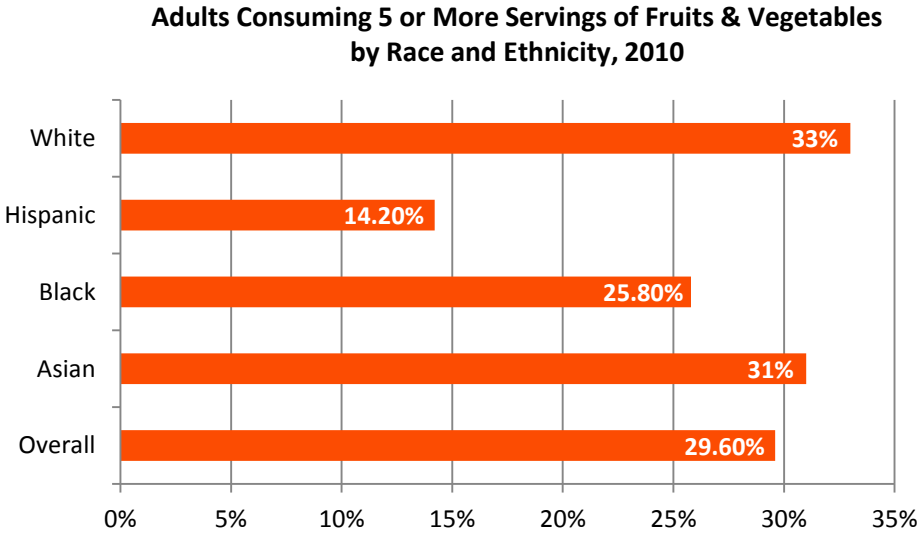


Figure 2. Fruit and Vegetable Consumption by Race and Ethnicity, Montgomery County, 2010
(Sources: Healthy Montgomery. 2014)

Food Environment

Food insecurity is defined by the USDA as lack of access to enough food for a healthy life and limited or uncertain availability of adequately nutritious foods[3]. In 2014, 7 percent of the Montgomery County population experienced food insecurity, compared to 12.7 percent of the Maryland population and 15.4 percent of the country's population. Prince George's County had a higher rate of food insecurity at 15.5 percent (Figure 3).

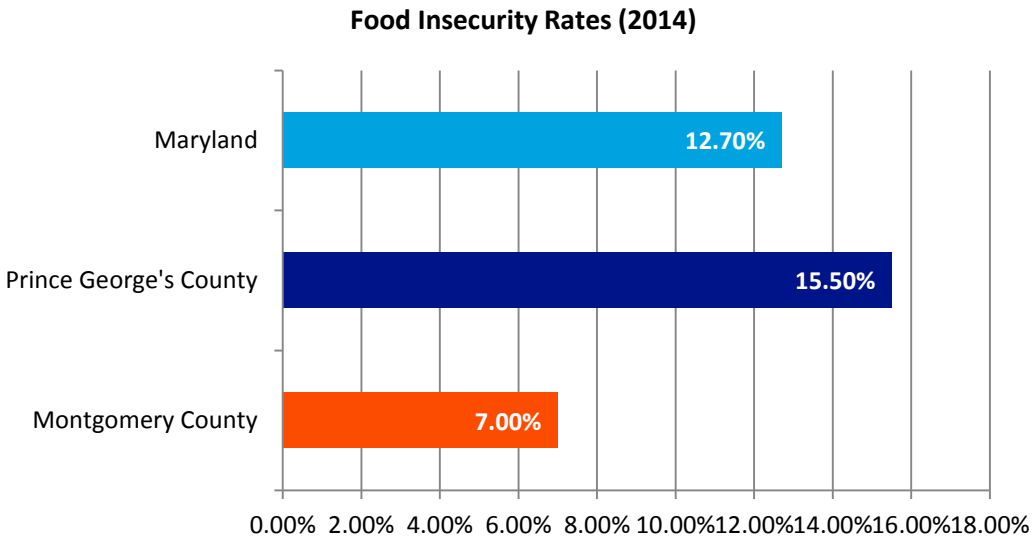


Figure 3. Percent of Food Insecure Population.
(Source: Feeding America. Map the Meal Gap, 2014)

One measure of healthy food access and environmental influence on healthy behavior is access to grocery stores. The Community Commons defines grocery stores as supermarkets and smaller grocery stores primarily engaged in retailing a general line of food, such as canned and frozen foods; fresh fruits and vegetables; and fresh and prepared meats, fish, and poultry. In Montgomery County there are 21.1 grocery stores per 100,000 population, a rate very similar to that of Maryland (21.5 per 100,000 population) and the U.S. (21.2 per 100,000). However, in Prince George's County, there are only 18.42 grocery stores per 100,000 population (Figure 4).

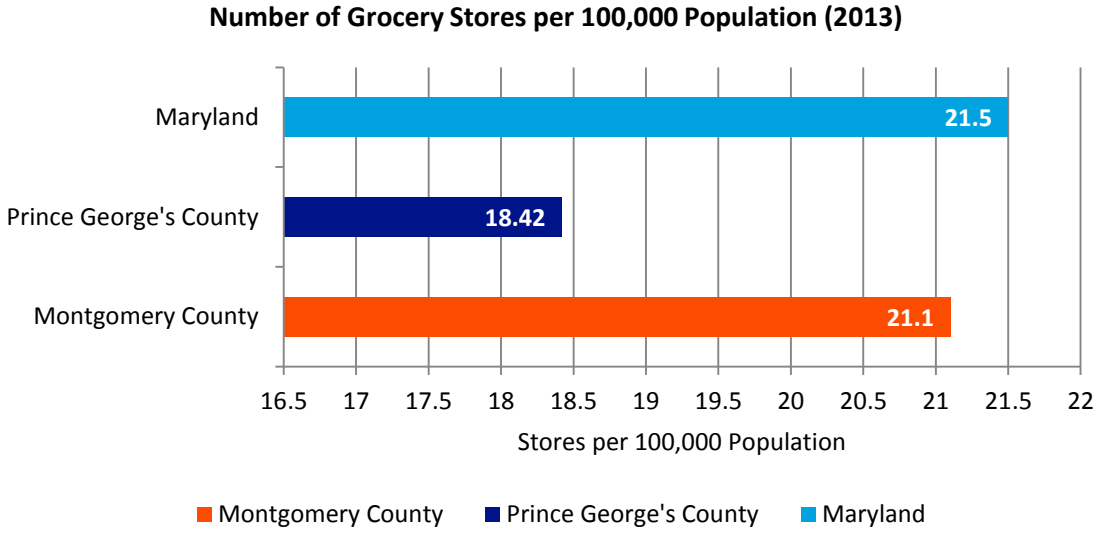


Figure 4. Number of Grocery Stores per 100,000 Population.
(Source: Community Commons Community Health Needs Assessment, 2013)

[3] Feeding America (2016). Food insecurity in the United States. *Feeding America*. Retrieved from: http://map.feedingamerica.org/county/2014/overall

Fast food restaurant access has been on the rise over the past several years at the local and national levels. From 2009 to 2013, the rate in Maryland has increased from 85.77 to 86.6 per 100,000 population.[4] In Prince George's County, residents have access to fast food restaurants at a rate of 87.21 per 100,000 population, a rate higher than Montgomery County (81.6 establishments per 100,000 population), and higher than that of the country overall (72.7 per 100,000 population), but slightly more than that of Maryland (86.6 per 100,000 population) (Figure 5).

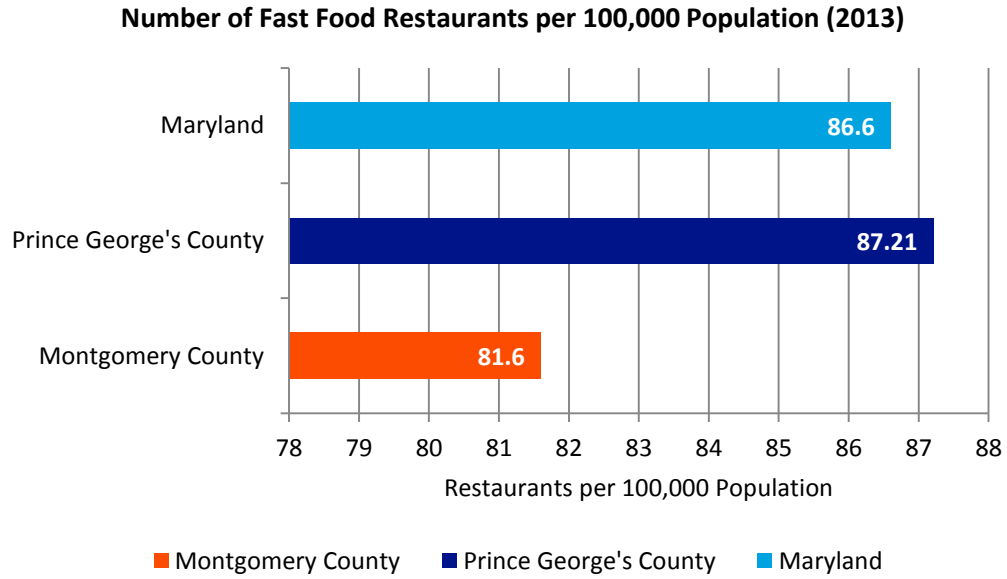


Figure 5. Number of Fast Food Restaurants per 100,000 Population.
(Source: Community Commons Community Health Needs Assessment, 2013)

[4] IP3 and CARES – University of Missouri. (n.d.) Community health needs assessment data: Health indicators report. Retrieved from: http://assessment.communitycommons.org/CHNA/report?page=3&id=404&reporttype=libraryCHNA

Community Resources

Local efforts aimed at improving access to healthy food include food banks, supplements to school lunch programs, and transportation solutions to help people access food resources. These organizations offer innovative approaches to providing food for people in need in Adventist HealthCare Rehabilitation's CBSA.

Several food banks work to incorporate fresh foods into their normal distribution. Manna Food Center, a central food bank in Montgomery County, provides food assistance directly to individuals from 14 locations across the county. Manna works with local farms and orchards to provide fresh fruits and vegetables to their clients. In 2009, Manna provided food to over 100,000 people, assisting approximately 5 percent of Montgomery County residents. In Prince George's County, Community Support Systems serves over 7,000 people each year. The Community Support Systems pantry has canned food but also offers fresh fruit, vegetables, and meat through partnerships with local farmers.

In 2005, Manna implemented a remedy for a problem many teachers reported on Mondays during the school year – weekend hunger. This program, called Smart Sacks, offers eligible students a backpack full of nutritious, kid-friendly meals for the weekend, which the students receive on Fridays and return on Mondays. The Smart Sacks program feeds approximately 1,400 students each week in 40 elementary schools. This program is designed to address the issue that between 25 and 30 percent of students in Montgomery County qualify for free or reduced-price meals at school, putting them at risk of food insecurity.

Some local organizations recognize transportation challenges, especially for people with limited income. Several local food programs deliver boxes of food to their clients, including Germantown HELP, Manna Food Center, and Community Support Systems. Additionally, the food pantry at Community Support Systems has a reduced-price bus service providing transportation to and from the pantry. Since the food pantry is the point-of-entry for many new clients, Community Support System brings many of its other services to the pantry location, including health screenings, advocacy services, and other assistance programs. Whether they offer delivery, transportation, or programs directed to children in need, these organizations have worked to overcome access challenges to deliver food and other services to those who need it.

10.3 Housing

A person's living situation – the condition of their homes and neighborhoods – is a crucial determinant of health status. Across the United States, a disproportionate percentage of minority households are affected by moderate and severe housing problems (Figure 1).

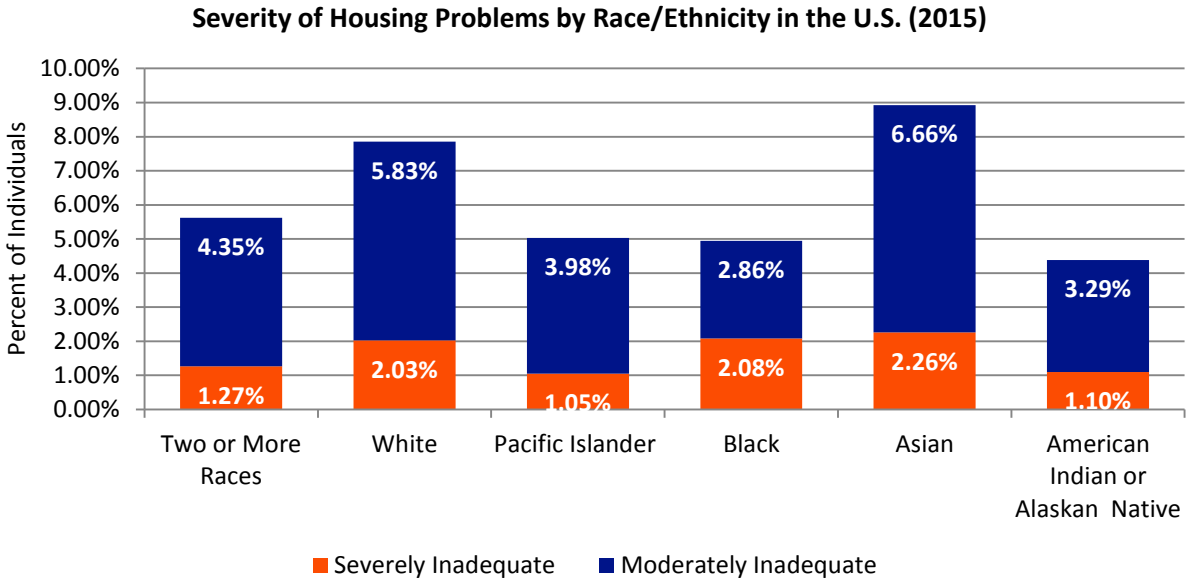


Figure 1. Severity of Housing Problems by Race/Ethnicity in the US, 2015
Note: Physical problems include plumbing, heating, electrical, and upkeep
(Source: U.S. Census Bureau, American Housing Serving, 2015)

At the local level, 17 percent of households in Maryland, 18 percent of households in Montgomery County, and 20 percent of households in Prince George's County were identified as having at least 1 of 4 severe housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities.[5]

Montgomery County Housing Statistics

- Renters spending 30 percent or more of household income on rent: 52.7 percent
- Homeowner vacancy rate: 0.8
- Housing units in multi-unit structures: 34.3 percent
- Housing units: 389,030 (2015)
- Homeownership rate: 64.3 percent
  Median value of owner-occupied housing units: $474,900
  (Source: U.S. Census Bureau, ACS, 1-Year Estimate, 2015)
- Households: 365,235
- Persons per household: 2.76
  (Source: U.S. Census Bureau, QuickFacts, 2011–2015)

[5] University of Wisconsin – Population Health Institute. (2016). Severe housing problems – Maryland, 2008-2012. Retrieved from: http://www.countyhealthrankings.org/app/maryland/2016/measure/factors/136/data

Prince George's County Housing Statistics

- Renters spending 30 percent or more of household income on rent: 52.4 percent
- Homeowner vacancy rate: 1.7
- Housing units in multi-unit structures: 32.5 percent
- Housing units: 331,294
- Homeownership rate: 61.3 percent
  Median value of owner-occupied housing units: $272,200
  (Source: U.S. Census Bureau, ACS, 1-Year Estimate, 2015)
- Households: 305,610
- Persons per household: 2.86
  (Source: U.S. Census Bureau, QuickFacts, 2011–2015)

Spotlight on Homelessness

Perhaps the most extreme case of living situation having a negative impact on health is that of homelessness. Homelessness amplifies the threat of various health conditions and introduces new risks, such as exposure to extreme temperatures. People who experience homelessness have multidimensional health problems and often report unmet health needs, even if they have a usual source of care.

In January 2016, a Point-In-Time Enumeration survey found there has been a decrease in the homeless population in both Montgomery County and Prince George's County (Figure 2)[6]. Since 2015, the number of homeless individuals has decreased by 11 percent in Montgomery and by 13 percent in Prince George's.

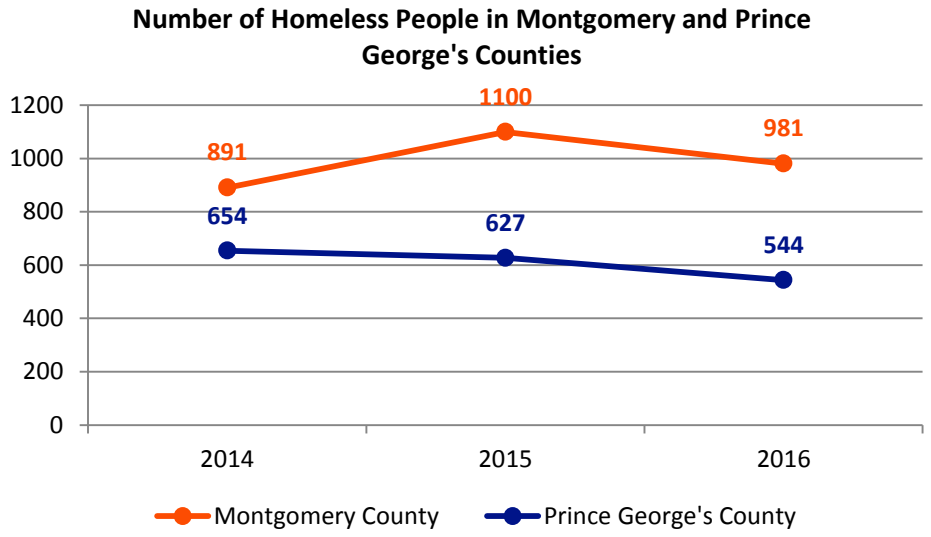


Figure 2. Number of Homeless People in Montgomery County and Prince George's County from 2014 to 2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey, 2016)

In Montgomery County, the homeless population in 2016 included 109 homeless family units, made up of 128 adults and 230 children (Figure 3). Prince George's County's homeless population comprised of 105 family units, which included 118 adults, and 190 children (Figure 4).

[6] Chapman H. (2016). Homelessness in Metropolitan Washington. May 2016. Retrieved from: http://www.missiondc.org/data/2016_Homeless_Report.pdf?rev=F1BF

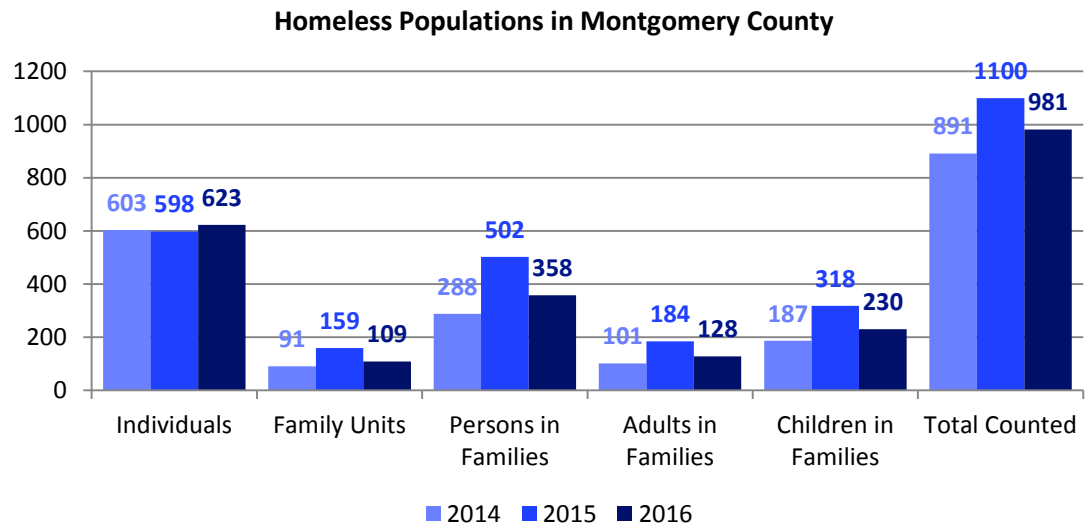


Figure 3. Homeless Populations in Montgomery County, 2014-2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey, 2016)

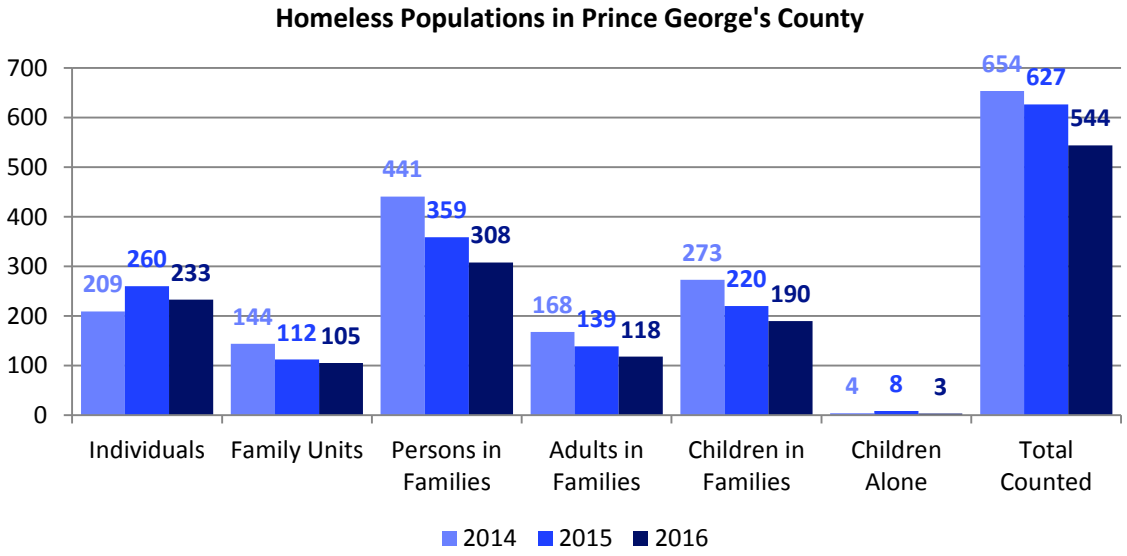


Figure 4. Homeless Populations in Prince George's County, 2014-2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey, 2016)

Among the homeless populations, numerous individuals reported various health, mental, and physical issues. In Montgomery County, 151 individuals were chronically homeless, 17 were US veterans, 127 were victims of domestic violence, 114 were suffering from co-occurring disorders (mental and substance abuse), 80 were physically disabled, and 85 were individuals with limited English proficiency. Similar issues were found among the Prince George's County homeless population (Figure 5).

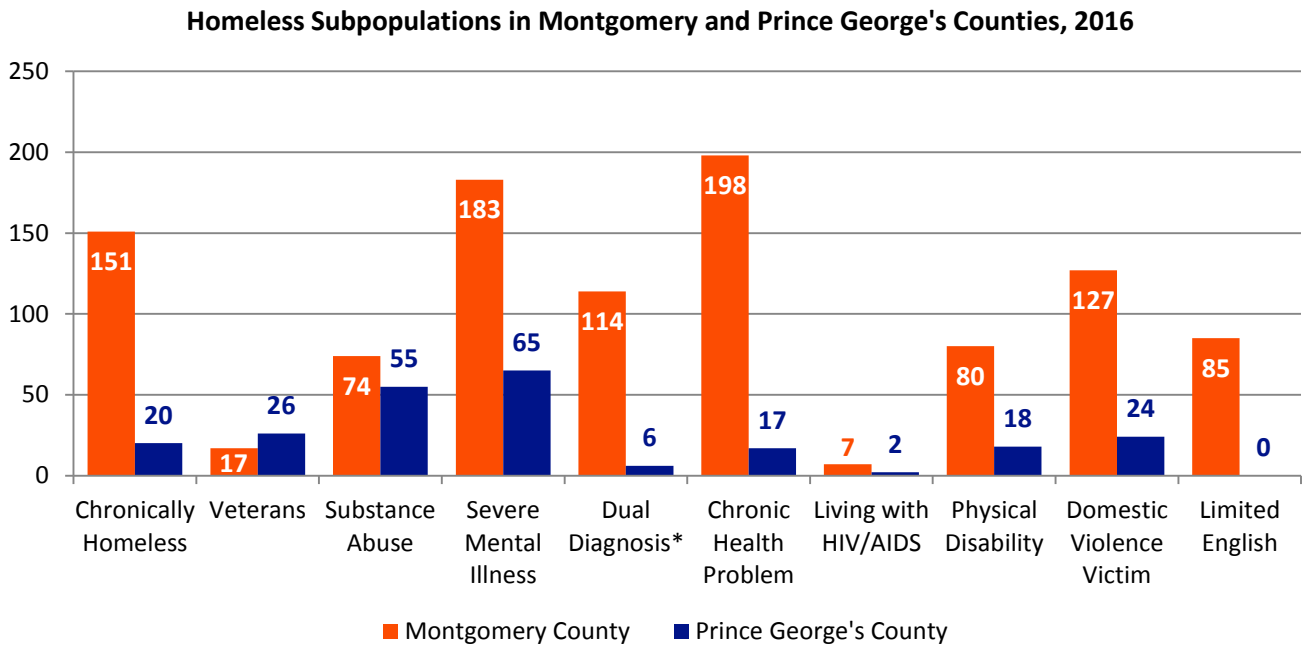


Figure 5. Homeless Subpopulations in Montgomery County and Prince George's County in 2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey, 2016)

Community Resources

Washington Adventist Hospital supports and partners with a non-profit organization in Montgomery County called Interfaith Works, which provides assistance to the county's homeless population. According to Interfaith Works, approximately 1,064 people are homeless on any given day in Montgomery County. Interfaith Works provides shelter to approximately 744 homeless men and women each night, and has served 135,000 meals through its Homeless Services programs.

Several efforts in Washington Adventist Hospital's CBISA area aim to improve the homeless population's living situation. One office within the Montgomery County Department of Health and Human Services helps homeless people in the county access medical care. Healthcare for the Homeless coordinates with providers to offer healthcare services for homeless individuals living in the county. This office trains local hospital staff to identify patients who are homeless in order to link them with discharge planning—including follow-up medical care, designated medical beds in shelters, and access to prescriptions.

The Montgomery County Coalition for the Homeless has shelters and emergency housing as well as a program to provide permanent housing for families throughout the county. These permanent housing solutions also offer case management to help people succeed as tenants. The organization helps residents apply for Medicaid, food stamps, and other entitlement programs. It provides vocational assistance for their residents, including GED and ESL classes at Montgomery College. The Coalition provides bus tokens and other means for people to help them travel within the county. These local programs attempts to overcome challenges to people's housing and living situations.

Local efforts to improve living situations include those that promote home ownership, provide temporary financial or in-kind assistance to pay bills, and offer resources for homeless people. To encourage home ownership within Prince George's County, the Housing Initiative Partnership helps people with limited income buy homes in the county. The program buys older houses, rebuilds and repairs them, and sells them to people who qualify for the program based on their income. The Partnership also offers homeownership counseling and workshops to help people learn more about buying a home and being a successful homeowner. The Partnership's foreclosure prevention counseling and workshops aim to keep people in the homes they own. It assists those who are having trouble paying their mortgages by screening them for tax assistance and loan modification programs. The program also helps clients develop a plan to prevent foreclosure through budgeting, refinancing, and engaging with lenders.

Other organizations provide assistance to help people pay their bills. Community Support Systems in Prince George's County has a Temporary Cash Assistance Fund to help people in the community pay their bills, buy kerosene or heating oil, and make car or home repairs. They also help residents enroll in energy assistance programs. Other programs in the community, including the Housing Initiative Partnership as well as the county departments of health, link residents to energy assistance programs that help make energy costs more affordable for people with limited income.

Each of these local programs attempts to overcome challenges to people's housing and living situations. However, since problems with housing can be quite expensive to remedy, such programs are limited in the number of families they can help.

10.4 Transportation

The majority of both Prince George's County (65.1 percent) and Montgomery County (65.6 percent) residents drive to work alone or utilize public transportation (Montgomery County: 15.9 percent, Prince George's County: 17.1 percent) (Figure 1).

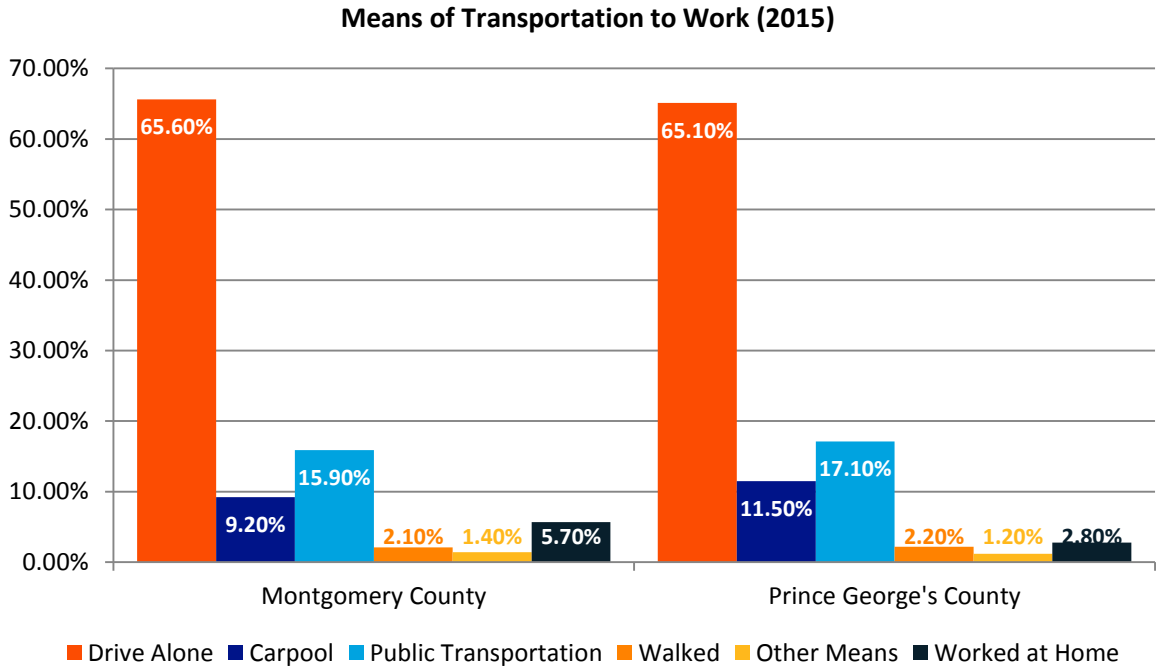


Figure 1. Means of Transportation to Work.
(Source: US Census Bureau, 2015 ACS 1-Year Estimates)

The mean travel time to work for Montgomery County is 34.4 minutes; whereas the mean travel time for Prince George's County is 36.2 minutes (Figure 2).

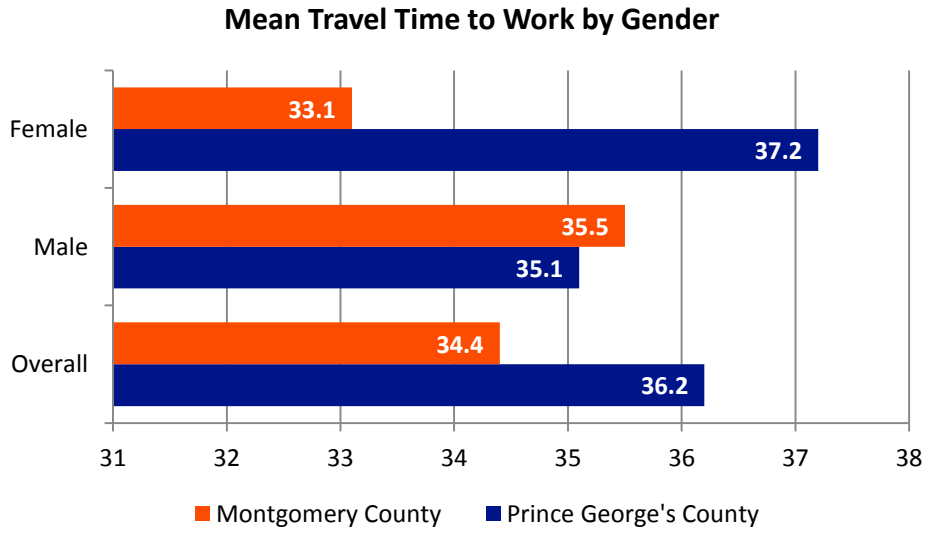


Figure 2. Mean Travel Time to Work by Gender for Prince George's County and Montgomery County
(Sources: Healthy Montgomery, 2010-2014; PGC Health Zone, 2010-2014)

Pedestrian Safety

The rate of pedestrian injuries on public roads in Montgomery County (41.3 per 100,000 population) is nearly equivalent to that of the state (42.5 per 100,000 population), whereas the rate in Prince George's County is slightly lower at 39.6 per 100,000 population. The rates have increased since the 2013 County measures and they remain higher than the SHIP 2017 target of 35.6 per 100,000 population (Figure 3).

County	SHIP Objective	SHIP 2012 County Measure	SHIP 2013 County Measure	SHIP 2014 County Update	SHIP 2014 Maryland Update	Maryland SHIP 2017 Target
Prince George's	Reduce rate of pedestrian injuries	35.4	37.2	39.6	42.5	35.6
Montgomery		38.9	35.6	41.3		

Figure 3. Rate of Pedestrian Injuries per 100,000 Population, Prince George's and Montgomery Counties, 2014 (Source: SHIP, 2014)

The pedestrian death rate in Montgomery County, at 1.2 deaths per 100,000 population, is lower than the Healthy People 2020 target of 1.4 deaths per 100,000 population; however, the pedestrian death rate in Prince George's County at 1.7 deaths per 100,000 population is higher than the national target.[7] Both Montgomery and Prince George's Counties have a higher pedestrian rate than that of Maryland (0.9 per 100,000 population).

From 2011 to 2014 in Montgomery County, white non-Hispanic individuals experienced the highest number of traffic fatalities among both vehicle occupants and non-occupants (Figure 4 -A).

[7] Healthy Communities Institute. (2013). Pedestrian death rate. *PGC Health Zone.* Retrieved from: http://www.pgchealthzone.org/

Montgomery County Traffic Fatalities (2011-2014)					
Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Occupants (All Vehicle Types)	Hispanic	0	2	5	4
	White Non-Hispanic	9	11	12	13
	Black, Non-Hispanic	1	7	6	4
	Asian, Non-Hispanic/Unknown	0	0	0	0
	All Other Non-Hispanic or Race	1	3	3	4
	Unknown Race and Unknown Hispanic	19	7	1	3
	Total	30	30	27	28
Non-Occupants (Pedestrians, Pedalcyclists and Other/Unknown Non-Occupants)	Hispanic	0	0	1	1
	White Non-Hispanic	2	4	6	4
	Black, Non-Hispanic	1	2	4	1
	Asian, Non-Hispanic/Unknown	0	0	1	1
	All Other Non-Hispanic or Race	0	0	0	0
	Unknown Race and Unknown Hispanic	7	1	1	4
	Total	10	7	13	11
Total	Hispanic	0	2	6	5
	White Non-Hispanic	11	15	18	17
	Black, Non-Hispanic	2	9	10	5
	Asian, Non-Hispanic/Unknown	0	0	1	1
	All Other Non-Hispanic or Race	1	3	3	4
	Unknown Race and Unknown Hispanic	26	8	2	7
	Total	40	37	40	39

Figure 4-A. Montgomery County Fatalities by Person Type, Race and Ethnicity, 2011-2014
(Source: National Highway Traffic Safety Administration-Traffic Safety Facts, 2015)

From 2011 to 2014 in Prince George's County, black non-Hispanic individuals experienced the highest number of traffic fatalities among both vehicle occupants and non-occupants. It is notable that there was a high percentage of traffic fatalities listed as having an unknown race and ethnicity; particularly in 2011 (Figure 4-B).

Prince George's County Traffic Fatalities (2011-2014)					
Person Type by Race/Hispanic Origin		**2011**	**2012**	**2013**	**2014**
Occupants (All Vehicle Types)	Hispanic	3	5	7	3
	White Non-Hispanic	13	7	8	8
	Black, Non-Hispanic	26	36	35	47
	All Other Non-Hispanic or Race	1	0	3	1
	Unknown Race and Unknown Hispanic	31	15	17	9
	Total	74	63	70	68
Non-Occupants (Pedestrians, Pedalcyclists and Other/Unknown Non-Occupants)	Hispanic	2	1	0	4
	White Non-Hispanic	5	4	1	6
	Black, Non-Hispanic	9	14	10	12
	All Other Non-Hispanic or Race	0	0	0	0
	Unknown Race and Unknown Hispanic	15	5	6	8
	Total	31	24	17	30
Total	Hispanic	5	6	7	7
	White Non-Hispanic	18	11	9	14
	Black, Non-Hispanic	35	50	45	59
	All Other Non-Hispanic or Race	1	0	3	1
	Unknown Race and Unknown Hispanic	46	20	23	17
	Total	105	87	87	98

Figure 4-B. Prince George's County Fatalities by Person Type, Race and Ethnicity, 2011-2014
(Source: National Highway Traffic Safety Administration-Traffic Safety Facts

Community Resources

There are a number of public transportation options in Montgomery County and Prince George's County, including: Ride On, Park and Ride, Metrobus, Metrorail, MetroAccess, Call 'N' Ride, Amtrak, MARC Train, and VRE.

- Ride On is wheelchair accessible
- Available transportation options for seniors and persons with disabilities
- Free fare (during certain hours)
- Provide service for persons unable to use regular transit
- Provide subsidized tax trips for low-income persons with disabilities or senior citizens

Alternative Transportation in Montgomery County and Prince George's County

- The American Cancer Society provides free transportation for cancer patients traveling to a cancer-related medical appointment.
- Angel Wheels to Healing provides non-emergency long-distance ground transportation to patients in need.
- Disabled American Veterans (DAV) Transportation Program provides free transportation (with ID) to VA medical facilities for injured and ill veterans.
- Taxis.

Montgomery County

- Med-Care Transportation offers non-emergency transportation to and from medical appointments or hospital visits, operates 24 hours a day including holidays, and payment options include cash or credit card.
- Senior Connection offers free escorted transportation, shopping and errand assistance, and other simple tasks for seniors.

Prince George's County

- All American Ambulance (AAA) Transport provides ambulance transportations for clients with severe medical needs (e.g. life support and neo-natal intensive care) and is wheelchair accessible. Medicaid beneficiaries may qualify for free or reduced rides.
- Bowie Senior Center Transportation offers curb-to-curb transportation for Bowie seniors 55+ to the Senior Center, Medical Appointments, and various other locations only within Bowie City limits for a donation of 50 cents per ride.
- City of Hyattsville Call-A-Bus provides roundtrip transportation services to seniors and people with disabilities by reservation for curbside pickup. The service will take patrons to their appointments within six miles of the city for $2.00 and care-givers/companions ride for free.

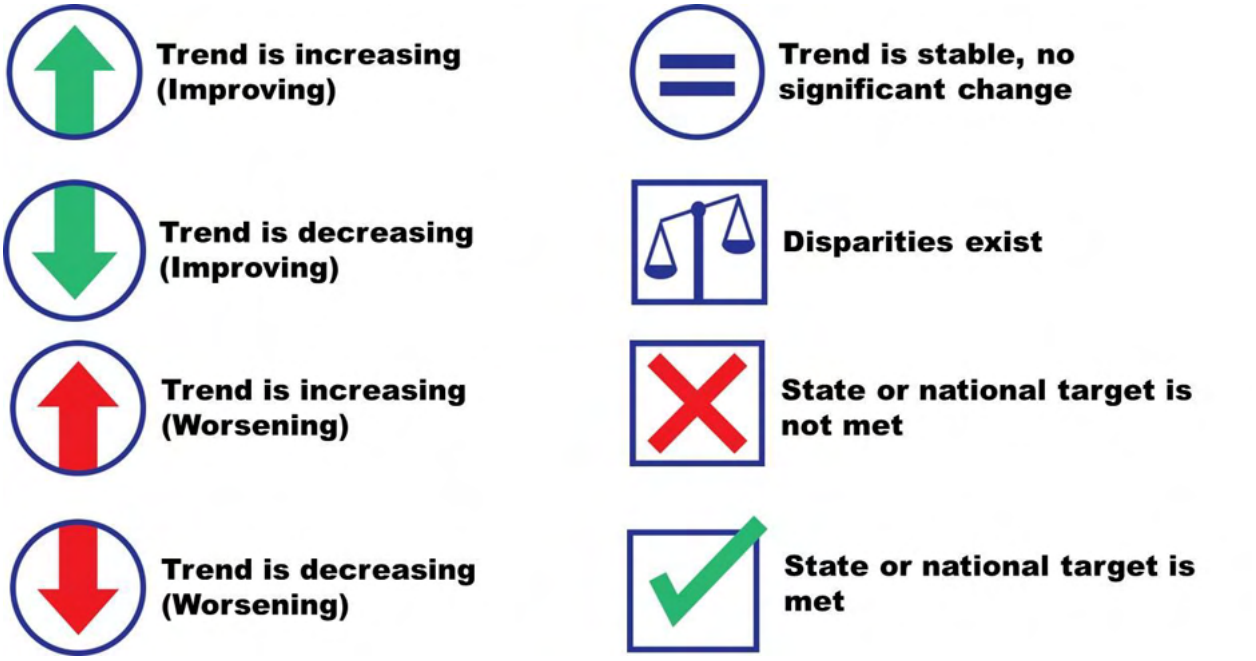
The Maryland Transportation Resource Information Point (MDTRIP) directory is a web resource that allows one to search for modes of transportation by county, vehicle and accessibility type. The directory provides the service contact information and method of payment. It also lists potentially free transportation services for senior citizens, Medicare beneficiaries, veterans, and those paratransit eligible (e.g. Prince George's County Senior Transportation Service is free to senior citizens with ID).

Section V: Evaluation

Introduction

Based on the findings from the 2014-2016 Community Health Needs Assessment, Adventist HealthCare Washington Adventist Hospital developed an Implementation Strategy to address those needs. An overview of each of the major programs undertaken over the past three years, as well as their outcomes, is provided below.

For each program, the need as originally identified in the 2014-2016 Community Health Needs Assessment is provided as is an update as to the current status of that need in the community. The current status symbols can be interpreted as follows:



Help Stop the Flu

Need *As originally identified in the 2014-2016 CHNA*	From 2008 to 2010, the rate of emergency department visits due to immunization-preventable illnesses (i.e. influenza and pneumonia) was higher among young adults aged 18 to 24 than adults aged 25 and older in Montgomery County. By race and ethnicity, American Indians/Alaskan Natives and Blacks utilized the ER at a much higher rate than their racial counterparts for illness related to flu and pneumonia. In Montgomery County, Black residents (19 per 100,000), followed by whites (16.5 per 100,000), experienced the highest death rates due to flu and its complications. In the past, such as during the 2009 flu outbreak, there was a shortage of flu vaccines in Montgomery and Prince George's Counties.
Program Overview *Programs and initiatives conducted in response to the need identified*	The primary objective of this initiative was to implement strategies to address high influenza-related Emergency Room rates in the population served by Adventist HealthCare Washington Adventist Hospital, in particular in the 20901, 20904, and 20912 zip codes. Strategies for this initiative included: ▪ Partnering with Community Clinic, Inc. (a local FQHC located in ZIP code 20912 serving uninsured patients) and community organizations to provide free flu shots to residents with a greater need in ZIP codes with the highest ER rates due to immunization preventable influenza (20912, 20901, and 20904). ▪ Partnering with Care For Your Health (Dr. Anna Maria Izquierdo-Porrerra) to provide vaccine for micropractice patients. ○ Practice located in ZIP code 20904; secondary practice area to be covered includes 20901 and 20912. The patient population served by the Care for Your Health micropractice is 75% Hispanic, 12% Black, 5% White, 4% Asian, and 4% Other. The majority of patients are Spanish-speaking. ▪ Partnering with community organizations, places of worship, senior centers, community centers, low-income housing complexes, and county health departments in Montgomery and Prince George's Counties to provide free or low cost vaccinations to residents with the greatest need.
Outcomes *Process and Outcome measures*	From 2014-2016, Washington Adventist Hospital distributed 1,268 flu shots in the targeted zip codes. • 400 free flu shots (regular dose) were provided to the micropractice Care For Your Health (Dr. Anna Maria Izquierda-Porrera) located in ZIP code 20904 • 421 free flu shots (315 regular dose, 88 high dose, and 18 preservative free) were provided to Community Clinic Inc. in ZIP code 20912 • 210 free flu shots (110 regular dose and 100 high dose) were provided to Mobile Medical Care • 237 flu shots were administered through flu clinics in community locations such as farmer's markets and low-income housing complexes located in the target zip codes ○ 211 flu shots were administered in 20912, 10 in 20904, and 16 in 20901 In addition to providing free flu shots, health education on cold and flu prevention was provided at various community locations such as churches, community centers, and apartment complexes located within the target zip codes. Education included presentations, trivia, and glo germ hand washing demonstrations. There were over 217

	encounters at these events.	
Change over Time *Current status of the health need in the community*	Mortality rates due to influenza and pneumonia are trending downwards, decreasing from 16.8 to 12.9 per 100,000, in Montgomery County. Mortality rates due to influenza and pneumonia have been stable in Prince George's County at about 14 deaths per 100,000. Blacks visit the ER at a rate approximately three times higher than their white counterparts for flu-related issues. Asians have the lowest ER utilization rate. Vaccination rates for influenza have increased to 48.7% in Montgomery County, 36.9% in Prince George's County, and 44.6% in Maryland. Montgomery County, Prince George's County, and Maryland have not met the SHIP 2017 and Healthy People 2020 vaccination targets of 49.1% or 70%, respectively.	    

Victory Tower Wellness Partnership

Need *As originally identified in the 2014-2016 CHNA*	Approximately 17 percent of Montgomery County adults reported being diagnosed with a depressive disorder; about 17 percent of Prince George's County adults were diagnosed with a mental illness from 2008-2009. Suicide rate in Montgomery and Prince George's Counties were 7 per 100,000 and 6 per 100,000, respectively. In both counties, white males had the higher suicide rates compared to their racial and gender counterparts. In terms of substance abuse, 14.2 percent of Montgomery County residents reported binge drinking compared to 8.4 percent of Prince George's County residents. In Montgomery County, whites and Hispanics reported higher binge drinking than other racial groups. Nearly 14 percent of Prince George's County residents reported using tobacco, compared to 7.9 percent of Montgomery County adults.

Program Overview
Programs and initiatives conducted in response to the need identified
	The primary objective of this initiative was to enhance the health, wellness, and quality of life of the residents of Victory Tower, a low income senior housing complex in Takoma Park. In particular, Adventist HealthCare Washington Adventist Hospital has been working to address the mental and behavioral health needs of the residents. Hospital staff have engaged in regular contact with staff and management at Victory Tower in order to ensure that specific health needs and interests of residents were being addressed, and in order to evaluate progress and outcomes.
	
	Strategies for this initiative included:
	• A bi-weekly wellness circle organized by a certified substance abuse counselor. Bi-Weekly sessions are approximately 1.5 hours in length. The purpose of the wellness circle is to enhance quality of life and assist participants with sobriety and mental health maintenance. Weekly discussions focus on The Substance Abuse and Mental Health Services Administration's (SAMHSA) 8 Dimensions of Wellness, adapted from their Wellness Initiative:
	  ○ Emotional: coping effectively with life and creating satisfying relationships
	  ○ Financial: satisfaction with current and future financial situations
	  ○ Spiritual: expanding our send of the purpose and meaning in life
	  ○ Occupational: personal satisfaction and enrichment derived from one's work
	  ○ Physical: recognizing the need for physical activity, diet, sleep, and nutrition
	  ○ Intellectual: recognizing creative abilities and finding ways to expand knowledge and skills
	  ○ Environmental: good health by occupying pleasant, stimulating environments that support well-being
	• Provision of regular screening, health education, and resources. By maintaining a regular presence at Victory Tower, hospital staff has been able to build both rapport and trust among the residents.
	  ○ Monthly blood pressure screenings and heart health education.
	  ○ Health fairs including screenings, education, and lectures
	  ○ Healthy You, Healthy Talk lecture series

Outcomes *Process and Outcome measures*	**Weekly Wellness Circle (January 2015-December 2016)** • There have been an average of 3-7 participants at each wellness circle meeting • There were a total of 147 encounters in 2015 and 130 encounters in 2016 • Positive results were seen among the residents, both via self-report and through

feedback provided by Victory Tower management
    - Improvements in regards to depression, anxiety, drinking, and hoarding behaviors have been reported

Monthly Blood Pressure Screenings and Education (January 2015-December 2016)

- In 2015, 11 blood pressure screenings were held with a total of 123 encounters
    - Systolic readings:
        - 21.95% normal range
        - 42.28% prehypertension range
        - 26.83% stage 1 hypertension range
        - 8.13% stage 2 hypertension range
        - 0.81% hypertensive crisis range
    - Diastolic readings:
        - 55.3% normal range
        - 30.89% prehypertension range
        - 13% stage 1 hypertension range
        - 0.81% stage 2 hypertension range
- In 2016, 9 blood pressure screenings were held with a total of 89 encounters
    - Systolic readings:
        - 21.9% normal range
        - 50% prehypertension range
        - 23.4% stage 1 hypertension range
        - 4.7% stage 2 hypertension range
    - Diastolic readings:
        - 79.7% normal range
        - 14% prehypertension range
        - 4.7% stage 1 hypertension range
        - 1.6% stage 2 hypertensive crisis range

Health Fairs

- In 2014, a health fair was held at Victory Tower providing screenings for blood pressure, body composition/BMI, and grip strength to the residents, along with corresponding health education. The health fair also included a guest lecture on alcohol and substance abuse from our Certified Chemical Dependence Counselor. The counselor was also available to speak to individuals one-on-one, having set-up a table in a private area with additional information and referral resources. A lecture on diabetes from a certified diabetes educator was offered as well. A total of 40 residents were in attendance at the fair.
- In 2015, the fair moved to the spring. “Spring into Health at Victory Tower” was held in April and included screenings, education, and demonstrations.
    - A total of 82 individuals participated in the health fair
    - The following screenings and corresponding health education were provided
        - 62 blood pressure
        - 41 BMI/Body composition
        - 24 bone density
        - 39 carbon monoxide
        - 50 dermascan
        - 51 grip strength
    - Two health lectures took place
        - Nutrition & Diabetes - with approximately 50 attendees

	▪ Mental Health, Alzheimer's and Dementia – Approximately 60 attendees ○ A cooking and nutrition demonstration took place as well which had approximately 75 attendees • In 2016, the fair was once again held in the spring. The "2nd Annual Spring into Health" fair was held in April. ○ A total of 37 individuals participated in the health fair ○ The following screenings and corresponding health education were provided: ▪ 32 blood pressure screenings ▪ 18 BMI/Body composition ▪ 33 carbon monoxide ▪ 33 grip strength screening ▪ 5 waist to hip **Lecture Series** • A total of three lectures took place in 2015 on the following topics: ○ Colorectal cancer: 14 participants ○ Skin Cancer: 18 participants ○ Role of the caregiver – helping a loved one with mental health conditions and ○ depression during the holidays: approximately 15 participants • A total of six lectures took place in 2016 on the following topics: ○ Colorectal and breast cancer: 8 participants ○ Healthy diet: 18 participants ○ Men's health: 24 participants ○ Preventing the flu: 7 participants ○ Alzheimer's disease: 12 participants ○ Sexual health: 6 participants
Change over Time *Current status of the health need in the community*	Suicide rates in Montgomery County and Prince George's County have remained stable from 2010 to 2014. The suicide rates in both counties meet both SHIP 2017 and Healthy People 2020 targets (9 per 100,000 and 10.2 per 100,000, respectively). Across both counties and the state, whites have the highest suicide rates compared to other racial groups. Drug induced death rates have increased in Montgomery County (from 4.7 per 100,000 to 6.1 per 100,000) and Maryland overall (12.3 per 100,000 to 15.2 per 100,000). Adult smoking rates in both Montgomery and Prince George's Counties meet the SHIP 2017 and Healthy People 2020 targets (15.2% and 12%, respectively). Blacks in Montgomery County and whites in Prince George's County have higher smoking rates than other racial groups in their respective counties.

Breast Cancer Screening & Support

Need
As originally identified in the 2014-2016 CHNA

From 2004-2008, the incidence rate for breast cancer in Montgomery County was 125.7 per 100,000 females, and the mortality rate for 2006-2008 was 23.7 per 100,000 females (Healthy Montgomery). In Prince George's County, the incidence and mortality rates from 2004-2008 were 115.8 per 100,000 and 30.2 per 100,000, respectively (PGC Health Zone). In both counties, incidence rates among whites were higher than that of Blacks, but Blacks had the higher mortality rates.

From 2005 to 2009, there was a disparity in the cancer incidence rates between Montgomery County and Prince George's County. While there was a 9 percent higher breast cancer incidence rate in Montgomery County, there was 43 percent higher breast cancer mortality in Prince George's County (National Cancer Institute, 2012).

Program Overview
Programs and initiatives conducted in response to the need identified

The primary objectives of this initiative were to:

- Implement strategies that address breast cancer needs in the uninsured or underinsured population served by Adventist HealthCare Washington Adventist Hospital.
- Reduce the incidence, prevalence, and mortality rates of breast cancer in Montgomery and Prince George's County by increasing access to preventive breast care and follow-up treatment for uninsured or underinsured women over 40.
- Decrease the intervals between screening, diagnosis and treatment through cancer navigation.

Adventist HealthCare Washington Adventist Hospital implemented the following strategies to address the breast cancer screening and support needs of the population it serves:

Breast Cancer Screening Program: The Breast Cancer Screening Program provides free, comprehensive breast cancer services to women 40 years and over with limited or no health insurance in Montgomery County and Prince George's County, MD. Patients are educated about the importance of breast health and given access to free mammogram and diagnostic services. These services include mammograms, biopsies, ultrasounds, diagnostic services, treatment referrals and patient navigation to women in need.

Look Good, Feel Better: Through a partnership with the American Cancer Society, Adventist HealthCare offers Look Good, Feel Better sessions to the community it serves. The program is aimed at improving self-image appearance through free group, individual, and self-help beauty sessions that create a sense of support, confidence, courage and community. The two-hour sessions are led by a certified cosmetologist who teaches make-up tips, turban use, wig care, and beauty-related information to women undergoing cancer treatment. Participants are also given a free makeup kit.

Outcomes
Process and Outcome measures

Breast Cancer Screening Program (January 2014- November 2016)

- A total of 2,339 breast cancer screening and diagnostic services were provided
    - 1,415 of these services were screening mammograms. The remaining 924 services were diagnostic, including both mammograms and sonograms.
    - Demographics of individuals served:
        - Race:
            - 1.24% white
            - 31.64% Black

	• 5.17% Asian • 0.09% American Indian or Alaska Native • 0.09% Native Hawaiian • 40.67% other • 21.1% unknown ▪ Ethnicity: • 55.79% Hispanic/Latino • 37.71% Non-Hispanic • 6.5% Unknown ▪ Age: • 3.47% under 40 • 42.8% were 40-49 • 44% were 50-64 • 9.73% were 65 and over • In addition, the Breast Cancer team has worked to decrease follow-up time for program participants, particularly between screening and diagnostic mammograms. Efforts have included administrative process improvements as well as patient navigation. ○ In 2016, the screening to diagnostic mammogram patient call back time frame was on a downward trend, starting at 33 days in January and decreasing to 24 days in September. ○ Monthly Average for the year: 25.7 days (compared to 35.5 days in 2015) ○ While the numbers have been improving consistently, WAH continues to work toward the American Society of Clinical Oncology standard of 15 days followed by "world class" status which is reached at 5 days. **Look Good Feel Better** • Look Good Feel Better was held 12 times • There were a total of 76 participants
Change over Time *Current status of the health need in the community*	Data from the latest measurement period (2009-2013) shows that the incidence rate for breast cancer is 128.8 per 100,000 in Montgomery and 124.4 per 100,000 in Prince George's County. This indicates an increase in breast cancer incidence rates. Mortality rates for breast cancer have been decreasing in both counties. The current mortality rate is 22.6 per 100,000 in Montgomery County and 26.2 per 100,000 in Prince George's County. Neither Montgomery County nor Prince George's County meet the Healthy People 2020 target of 20.7 deaths per 100,000 for breast cancer. American Indians/Alaskan Natives in Montgomery County and Blacks in Prince George's County have the highest rate of breast cancer incidence. However, in both counties, Blacks have the highest rate of breast cancer mortality compared to their racial counterparts.

Parent Education & Support

Need *As originally identified in the 2014-2016 CHNA*	From 2000-2009, 7 percent of the Black women and 6.8 percent of Hispanic women in Montgomery County received late or no prenatal care, while 12.7 percent of the Asian women and 11.7 percent of the Hispanic women in Prince George's County received late or no prenatal care. Across both counties and the state, Black women had the highest rates of babies with low birth weights (Montgomery County: 11.2%; Prince George's County: 12.3%; Maryland: 13%). Infant mortality was also highest in Black communities (Montgomery County: 10.7 per 1,000; Prince George's County: 11.1 per 1,000; Maryland: 13.6 per 1,000).
Program Overview *Programs and initiatives conducted in response to the need identified*	Adventist HealthCare Washington Adventist Hospital has implemented programs to address the maternal and child health needs of the community it serves by providing education, support, and resources to mothers and families. The primary objectives of the initiative were to: • continue employing strategies that address maternal/child health needs, particularly around breastfeeding and infant mortality, in the population served by Washington Adventist Hospital • increase access to breastfeeding support programs and services for mothers in Montgomery County and Prince George's County • reduce infant mortality rate disparities in Montgomery County and Prince George's County, particularly among the Black and Hispanic populations **Hecho de Pecho**: Through Hecho de Pecho, Adventist HealthCare Washington Adventist Hospital provides a free, weekly, breastfeeding support group for Spanish-speaking mothers. It is a safe space for mothers to share their experiences and participate with other mothers in a cordial and informative meeting to promote breastfeeding. While the focus of each session is to address questions and concerns of the attendees, a curriculum and interactive activities are planned for each session as well. For the majority of the year (February-September) the group was peer led. Beginning in October 2016, the group was led by an International Board Certified Lactation Consultant. Refreshments are provided at each meeting and mothers are encouraged to bring their baby, older children, or a support person. **Warm Line**: Through the Warm Line, Adventist HealthCare Washington Adventist Hospital and Shady Grove Medical Center provide telephone assistance for breastfeeding questions and concerns, as well as evidence-based information for breastfeeding mothers and families. The Warm Line is staffed by an IBCLC (International Board Certified Lactation Consultant) and is available 7 days a week/365 days a year at (240) 826-6667. **Black Mothers' Breastfeeding Club:** Through the Black Mothers' Breastfeeding Club, Adventist HealthCare Shady Grove Medical Center and Washington Adventist Hospital provide a monthly community-based, peer-led, and culturally-tailored support group for expecting and new Black/African-American mothers in order to promote breastfeeding in the Black communities of Montgomery and Prince George's counties. At each meeting participants are provided with a hot meal and have the opportunity to win door prizes. Children and partners are welcome to attend.

Outcomes

Process and Outcome measures

Hecho de Pecho

- Hecho de Pecho began in June of 2015 and was offered on a weekly basis
  - The group met 15 times in 2015 with a total of 60 encounters
- In 2016, the group was offered on a monthly basis and met 11 times
  - There were a total of 259 encounters. Of these, 113 encounters were mothers and 146 were babies, children, and support persons.
- In the fall of 2016, a process improvement project was initiated for Hecho de Pecho utilizing the Baldrige model.
  - Two evaluation metrics were put into place:
    - Mothers in attendance at each session – target set at 9
      - Each session ranged from 8-20 mothers with an average of 11 mothers per session. With the exception of March which had 20 mothers in attendance, the numbers have held steadily between 8 and 9 from July through December.
    - Participants in attendance at each session – target set at 20
      - Each session ranged from 18 to 38 participants, with an average of 24 at each session. Participant numbers ranged from 23-38 from March to August, and have held steady at 18 from October to December.
  - Improvements were put into place in order to increase participation and better meet the needs of participants. An International Board Certified Lactation Consultant began leading classes starting in October. A curriculum of pre-natal and breastfeeding information has been put into place which includes interactive activities for participants. This has been well received by participants, showing an eagerness to participate and engage in further discussions.

Warm Line (January 2015 – December 8, 2016)*

- A total of 738 individuals have called into the warm line and received breastfeeding support from January through December 8, 2016. There have been a total of 997 calls/encounters.

BMBFC (January 2015 - June 2016)*

- Each Black Mother's Breastfeeding Club meeting was held for approximately 2 hours. There were a total of 8 group meetings.
- There were been a total 44 encounters.

**BMBFC and the Warm Line are Adventist HealthCare programs that are a joint effort between Shady Grove Medical Center and Washington Adventist Hospital.*

Change over Time

Current status of the health need in the community

In Montgomery and Prince George's Counties, the percentage of mothers who receive late or no prenatal care has increased over the past couple years.

There has been a downward trend in the percentage of mothers having babies with low birthweight in both Montgomery and Prince George's Counties.

	As of the 2014 measurement period, Blacks in Montgomery County and Hispanics in Prince George's County have the highest infant mortality rates (8.3 per 1,000 and 8.2 per 1,000, respectively). Overall, the trend is decreasing for infant mortality in both Montgomery and Prince George's Counties.