Community Health Needs Assessment

Adventist HealthCare Shady Grove Medical Center 2017–2019

Approved by Adventist HealthCare Board of Trustees in November 2016

Adventist HealthCare
Shady Grove Medical Center

Table of Contents

Section I: Introduction

Shady Grove Medical Center Overview

Shady Grove Medical Center

Shady Grove Medical Center is a licensed 290-bed acute care facility located in Rockville, Maryland. Opened in 1979, the hospital has since expanded to include a four-story patient tower with private rooms; a high-tech surgery department for inpatients and outpatients; a freestanding Emergency Center in Germantown and the comprehensive Aquilino Cancer Center.

Cancer Care and the Aquilino Cancer Center

Shady Grove Adventist Aquilino Cancer Center is the centerpiece of Shady Grove's cancer care services. It opened in the fall of 2013 and is the first community-based, free-standing, comprehensive cancer center in Montgomery County. Adjacent to Shady Grove Medical Center, the center provides a full-range of clinical services that include diagnostics, surgery, radiation, chemotherapy and immunotherapy, pain and symptom management, and clinical trials, along with a range of supportive services. The center also supports the hospital's inpatient cancer services.

Shady Grove Medical Center is accredited by the Commission on Cancer as a Community Hospital Comprehensive Cancer Program with Commendation. In addition, Shady Grove is accredited by the American College of Radiology (ACR), among only 15 percent of radiation oncology centers to hold this accreditation, and has received the Gold Seal of Accreditation in computed tomography (CT), or CAT scanning, from ACR.

Cardiac and Vascular Services

Shady Grove Medical Center provides innovative expert care and treatment to restore the heart and vascular system to wellness. Patients receive the finest in life-saving cardiac and vascular emergency procedures, state-of-the art diagnostics and treatment, and full cardiac rehabilitation services.

Shady Grove is one of four Maryland hospitals granted a two-year waiver to perform non-primary (elective) percutaneous coronary interventions (PCI) by the Maryland Health Care Commission (MHCC) as part of a multi-state clinical study based on the high quality of the cardiac program, high volumes of patients and excellent outcomes. In 2016, Shady Grove received the American College of Cardiology's NCDR ACTION Registry–GWTG Platinum Performance Achievement Award, one of only 223 hospitals nationwide to receive this honor for high standards of care for heart-attack patients.

Shady Grove is also decorated for high-quality stroke care. The hospital is designated a Primary Stroke Center by the Maryland Institute for Emergency Medical Services Systems (MIEMSS), providing a rapid and coordinated team approach and meeting rigid standards in both timeliness of stroke care and community education about stroke. In addition, the American Stroke Association in 2016 recognized Shady Grove with Gold Plus Quality Achievement and Target: Stroke Honor Roll recognitions for its fast, quality work in treating stroke.

The Birth Center and Children's Services

The experts at **The Birth Center at Shady Grove Medical Center** deliver nearly 5,000 babies a year. In addition, the hospital's Level III Neonatal Intensive Care Unit (NICU) provides a broad range of pediatric medical subspecialists and pediatric surgical specialists for critically-ill newborns with complex medical needs. In 2014, Shady Grove became the first Maryland hospital to earn Baby-Friendly designation from the World Health Organization and UNICEF for support services for breast-feeding mothers.

In 1996, Shady Grove Medical Center opened Montgomery County's first full-service emergency department just for children. **Shady Grove Medical Center's Pediatric Emergency Department** (ED) is staffed by physicians who are board-certified in pediatric emergency medicine, along with nurse practitioners, physician assistants, pediatric nurses and medical technicians certified to treat pediatric medical emergencies. The Pediatric Emergency Department is open 24 hours a day, seven days a week, and cares for more than 21,000 children each year.

Emergency Services

Shady Grove is home to a busy Emergency Department that sees nearly 94,000 cases a year. In addition to our main Emergency Department, Shady Grove oversees the **Adventist HealthCare Germantown Emergency Center (GEC)**, which opened in 2006. GEC provides the same full-service emergency care that patients receive on our main campus in a convenient site in the busy upcounty area of Montgomery County. Advanced technology allows the Emergency Center to be closely linked with Shady Grove Medical Center.

Surgical Services

Shady Grove's skilled physicians perform a wide variety of surgeries with the support of highly specialized nurses, anesthesiologists, and technicians. Our capabilities include robotic surgery tools that can speed healing times for many patients.

Orthopedics is a focus for Shady Grove, and our joint replacement program offers specialized staff on a dedicated unit with comprehensive patient education and support. Our **Joint Replacement Center** has earned the Gold Seal from The Joint Commission for quality outcomes and high standards of care in hip and knee replacement surgery. In addition, Shady Grove holds the only nationally-recognized accreditation for **metabolic and bariatric surgery,** recognized for our commitment to quality and patient safety by the American College of Surgeons (ACS) and the American Society for Metabolic and Bariatric Surgery (ASMBS).

Section II: Our Community

The Community We Serve

Shady Grove Medical Center primarily serves residents of Montgomery County, Maryland. Below, Figure 1 shows the percentages of discharges by county for Shady Grove Adventist Hospital:

County	Percentage
Montgomery	88.41%
Frederick	4.22%
Prince George's	2.36%

Figure 1. Shady Grove Medical Center discharges by county, 2015

Approximately 85.0 percent of discharges come from our Total Service Area, which is considered Shady Grove Medical Center'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:

20850 – Rockville, 20852 – Rockville, 20874 – Germantown, 20876 – Germantown 20877 – Gaithersburg, 20878 – Gaithersburg, 20879 – Gaithersburg, and 20886 – Montgomery Village.

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

20814 – Bethesda, 20817 – Bethesda, 20832 – Olney, 20837 – Poolesville, 20841 – Boyds, 20851 – Rockville, 20853 – Rockville, 20854 – Potomac, 20855 – Derwood, 20871 – Clarksburg, 20872 – Damascus, 20882 – Gaithersburg, 20901 – Silver Spring, 20902 – Silver Spring, 20904 – Silver Spring, and 20906 – Silver Spring (see Figure 2).

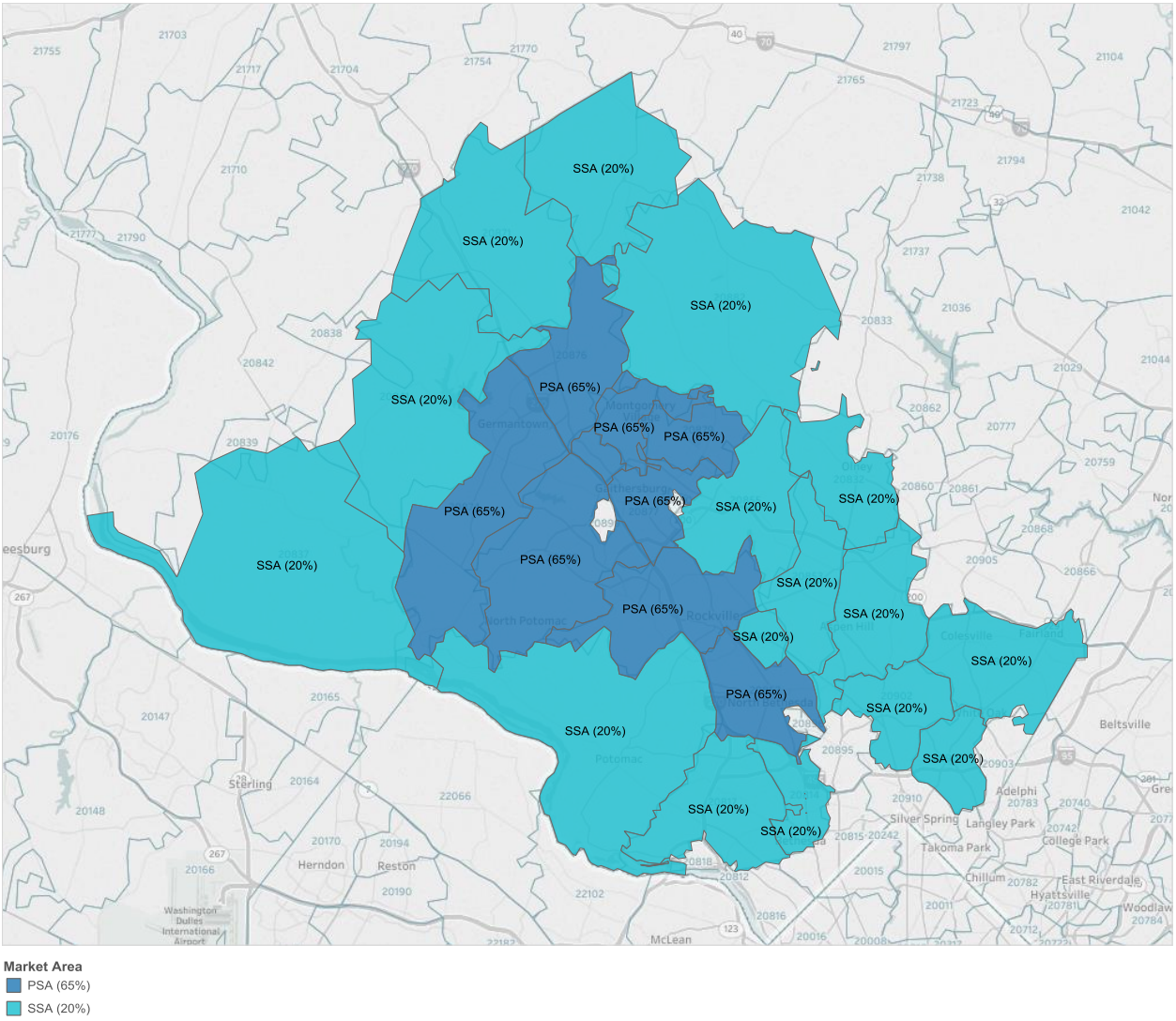


Figure 2. Map of Shady Grove Medical Center's Primary and Secondary Service Areas based on 2015 inpatient discharges

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 Shady Grove Medical Center'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.

Shady Grove Medical Center CBSA			
Location	**Zip Codes**	**Median Household Income (2015)**	**Percent Uninsured (2015)**
Montgomery County	20814	$115,359	2.80%
	20817	$169,485	2.40%
	20832	$126,762	3.60%
	20837	$145,518	5.60%
	20841	$152,853	7.50%
	20850	$107,170	7.10%
	20851	$82,017	19.60%
	20852	$97,151	6.30%
	20853	$100,965	11.50%
	20854	$192,649	3.50%
	20855	$120,060	6.40%
	20871	$126,543	6.00%
	20872	$108,995	4.60%
	20874	$81,769	11.40%
	20876	$91,359	10.80%
	20877	$65,853	20.60%
	20878	$117,261	7.00%
	20879	$88,777	8.30%
	20882	$145,054	3.60%
	20886	$75,593	15.90%
	20901	$97,454	14.20%
	20902	$85,044	19.60%
	20904	$72,458	13.40%
	20906	$71,423	16.50%
	Overall	$99,435	10.30%
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.)

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 833,581 people, of which approximately 46.5 percent are minorities (see Figure 4).

	2015 Estimates				
	WHITE	**BLACK/ AF AMER**	**ASIAN**	**NATIVE HI/PI**	**HISPANIC/ LATINO**
Community Benefit Service Area (CBSA)	446,055	144,101	135,485	472	166,927
	53.51%	17.29%	16.25%	0.06%	20.03%
Primary Service Area (PSA)	176,094	60,612	69,669	180	71,580
	50.07%	17.23%	19.81%	0.05%	20.35%
Secondary Service Area (SSA)	269,961	83,489	65,816	292	95,347
	56.02%	17.33%	13.66%	0.06%	19.79%

Figure 4. Population estimates (2015) by race/ethnicity for Shady Grove Medical Center'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 County. We serve one 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]. Racial and ethnic diversity has concurrently increased with this drastic increase in population numbers. Whites now comprise only 45.2 percent of the population of Montgomery County, a decrease of more than 20.0 percent over the last two decades. For the first time, minorities account for more than half of Montgomery County's population, making it a "majority-minority" county. The percentage of Hispanics or Latinos in Montgomery County (19.0 percent) is 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[4].

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.[5] The County's foreign-born population has gone

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

from 12.1 percent in 1980 to currently more than 30.0 percent.[6] 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 County, with the goal of eliminating disparities, achieving health equity, and improving the health of all groups.

Montgomery County Demographics:[7]

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

[6] 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

[7] 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)
Overall[8] (2012-2014)	84.6
Sex[9] (2013)	
Male	79.5
Female	83.6
Race/Ethnicity[10] (2012-2014)	
Black	82.5
White	84.4

Figure 6. Life Expectancy by County within CBSA, Montgomery County

Mortality Rates by County within the CBSA:

Montgomery County (2008): 555.5 per 100,000[11]

Montgomery County performed worse than the state baseline 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 7. Age-Adjusted Death Rate due to Falls, Montgomery County
(Source: Healthy Montgomery, 2016)

[8] 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
[9] Institute for Health Metrics and Evaluation (IHME). (2015). US county profile: Montgomery county, Maryland. Retrieved from: http://www.healthdata.org/us-county-profiles
[10] 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
[11] 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 baseline 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 8. Infant Mortality Rate, Montgomery County
(Source: Healthy Montgomery. 2014)

Income & Poverty

The median household income within Shady Grove Medical Center's service area is $98,917. Comparatively, the 2015 median household income in Maryland was $75,847, which was higher than the U.S. median of $55,775[12]. The median household income of the service area of Shady Grove Medical Center (in Montgomery County) may be higher than the state's median household income, but great income disparities exist when broken down by racial/ethnic groups. Throughout the area served by Shady Grove Medical Center, across racial and ethnic groups, whites have the highest median household income; Blacks and Hispanics are more likely to live in poverty (see Figure 9). 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 9). 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.

[12] 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

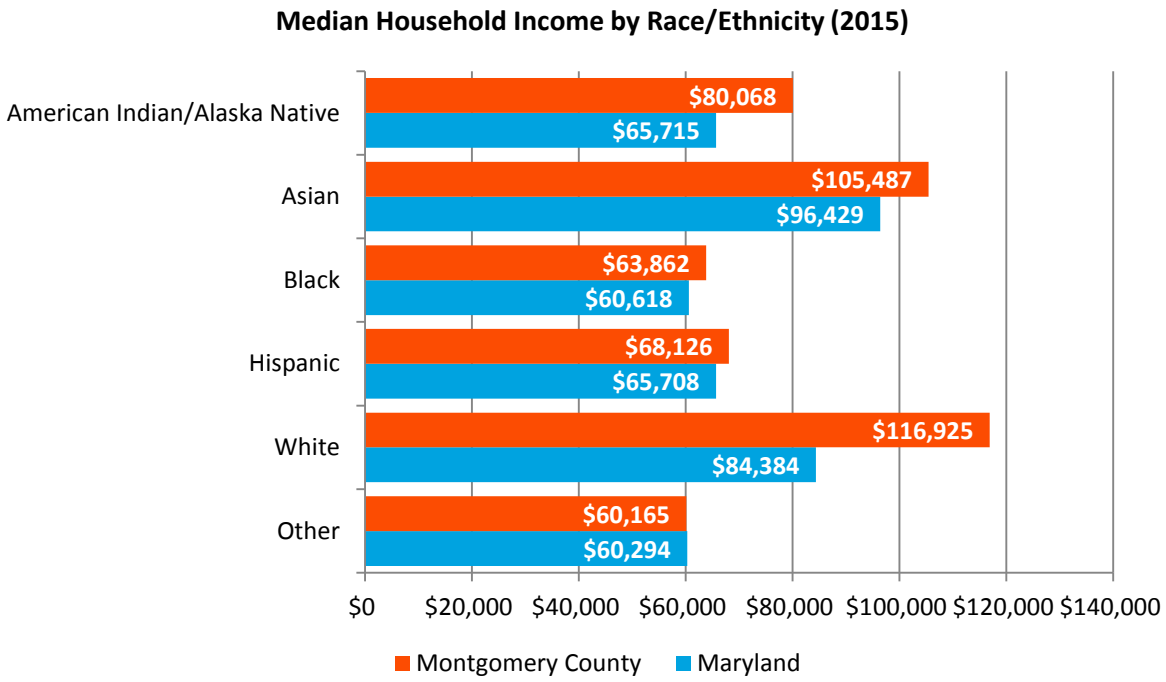


Figure 9. Percentage of Residents in Poverty by Race/Ethnicity in Montgomery and Prince George's Counties and Maryland, 2015 (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

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[13]. The majority of that percentage is comprised of minorities[14]. In 2015, across all counties in Maryland, as well as within the Montgomery County area, 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[15]. The 2015 federal poverty level for a family of four is $24,250 [16]. An overwhelming percentage of residents who identify as "Other," Hispanic, and Black are living below the poverty level in both Montgomery County and Maryland (See Figure 10). Over 12.0 percent of Black and Hispanic residents in Shady Grove Medical Center's service area are below the poverty level opposed to approximately 5 percent of white residents (see Figure 10).

[13] 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

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

[15] 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/nav/jsf/pages/index.xhtml

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

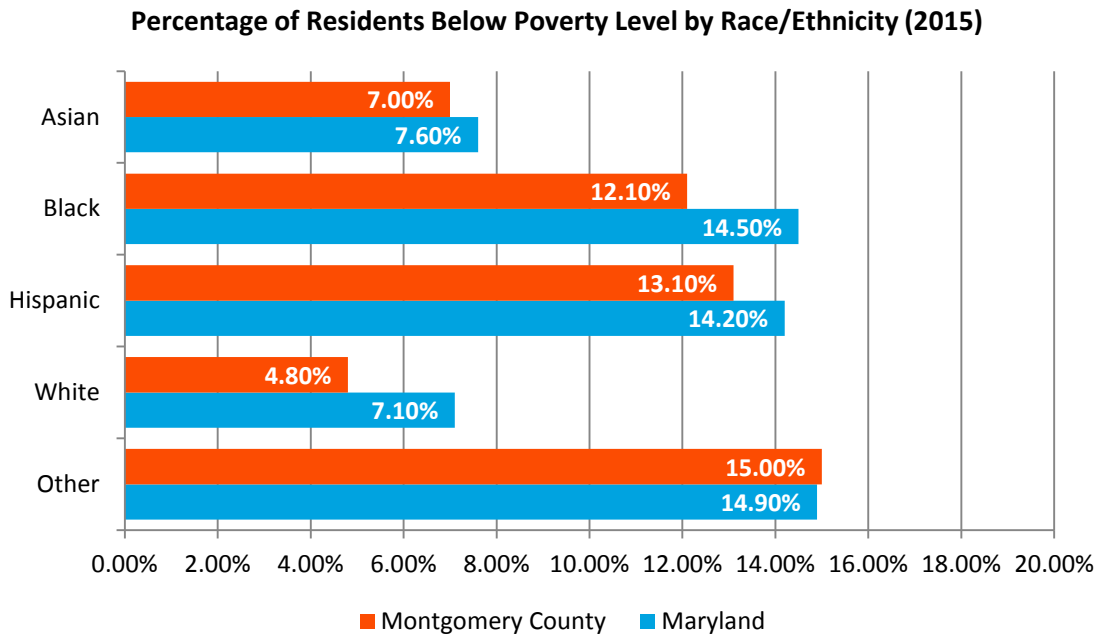


Figure 10. Percentage of Residents in Poverty by Race/Ethnicity in Montgomery County and Maryland, 2015
(Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

Access to Care/Health Insurance Coverage

Within Shady Grove Medical Center's service areas, 8.0 percent of all Montgomery County residents and 11.0 percent of all Prince George's County residents were uninsured[17]. 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[18].

[17] 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

[18] 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

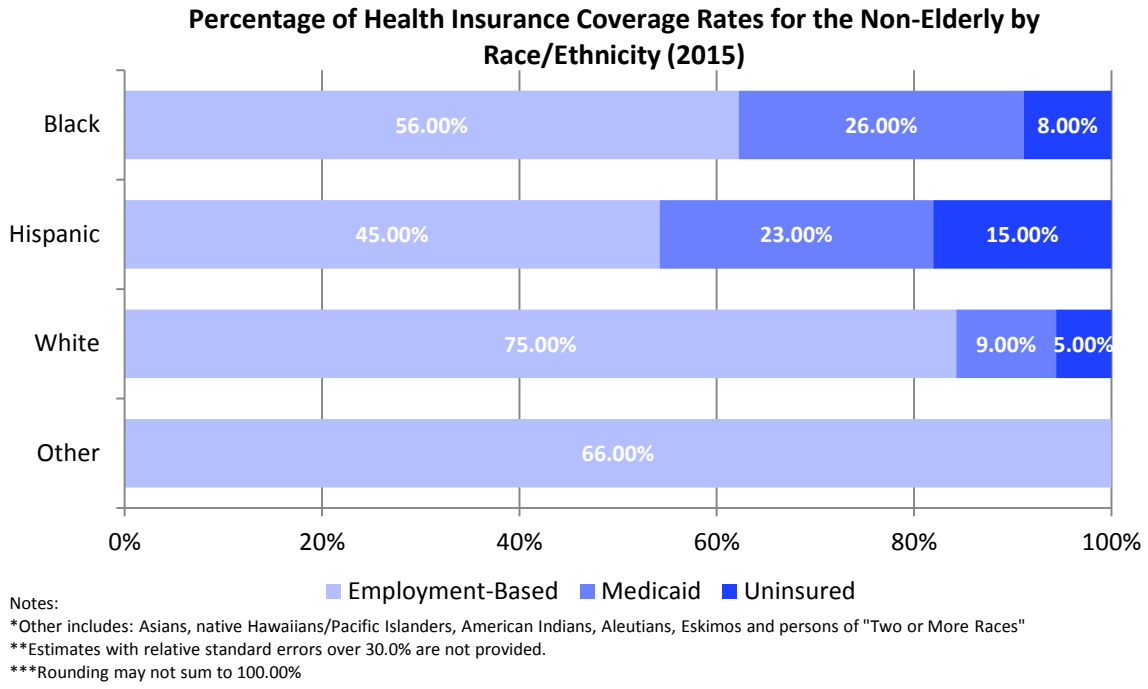


Figure 11. Health Insurance Coverage Rates of 0- to 64-Year Olds by Race/Ethnicity in Maryland, 2015. (Source: Kaiser Family Foundation, 2015 estimates based on U.S. Census Bureau 2016 Current Population Survey)

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 11).

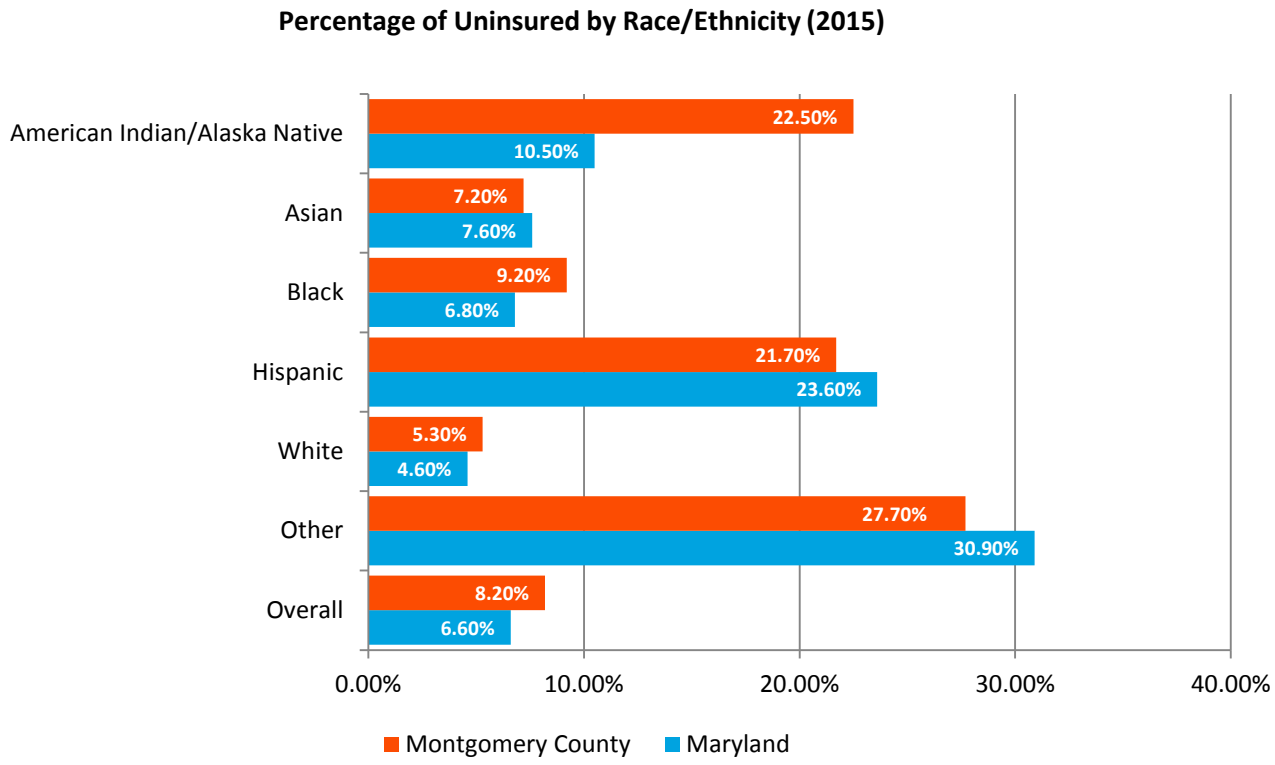


Figure 12. Percentage of Health Insurance Coverage by Race/Ethnicity in Montgomery County and Maryland, 2015 (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

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 12). This trend is similarly seen in Montgomery County as well (21.7 percent) (see Figure 11). 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[19]. 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 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) (see Figure 12).

[19] 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

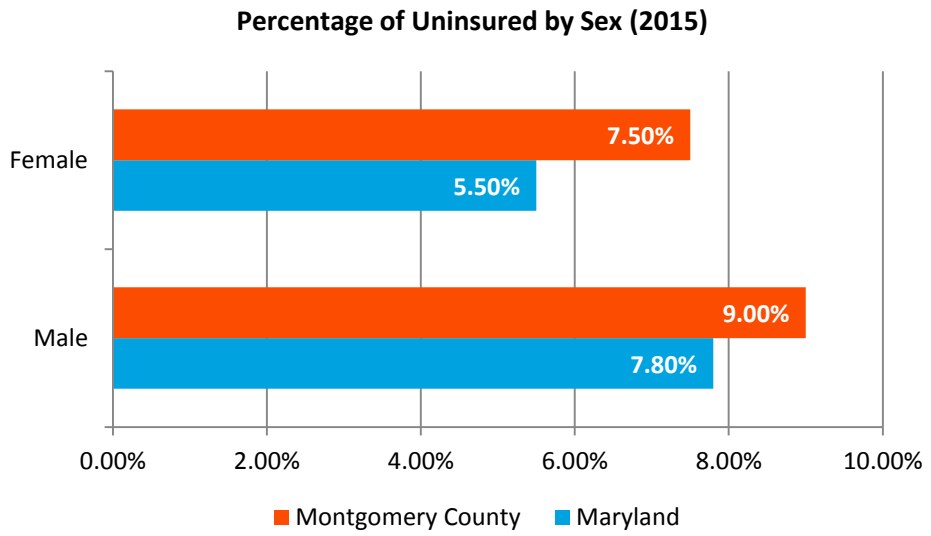


Figure 13: Percentage of Health Insurance Coverage by Sex in Montgomery and Prince George's Counties, and Maryland, 2015 (Source: U.S. Census Bureau-American Community Survey, 2015 1-year estimates)

In Montgomery County, 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 13).

Within Shady Grove Medical Center's' service areas, Montgomery County, the percentage of Medicaid recipients is 9.9 percent[20].

[20] 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, Shady Grove Medical Center (SGMC) 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 782 from Shady Grove Medical Center'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

[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

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 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, 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

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

Shady Grove Medical Center, 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.

SGMC 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, SGMC 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 SGMC, 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 SGMC. 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, Shady Grove Medical Center 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 Shady Grove Medical Center'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 Shady Grove Medical Center 2017-2019 Community Health Needs Assessment is as follows:

1. Diabetes
2. Breast Cancer
3. Colorectal Cancer
4. Maternal/Child Health
5. Cardiovascular Health
6. Prostate Cancer
7. Flu
8. Housing
9. Obesity
10. Behavioral health
11. Cervical Cancer
12. Lung Cancer
13. Food Access
14. Education
15. Asthma
16. Thyroid Cancer
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 high cholesterol; those who identify as other race reported higher rates of diabetes.
- 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, 782 (65.99 percent) live in the Adventist HealthCare Shady Grove Medical Center service area. Nearly 58 percent of the survey respondents self-identified as white, followed by Asians, Blacks, and Hispanics (Figures 1 & 2). The majority of the respondents was female (Figure 3). Approximately 46 percent of the respondents fell into the 26 to 45 years old category (Figure 4).

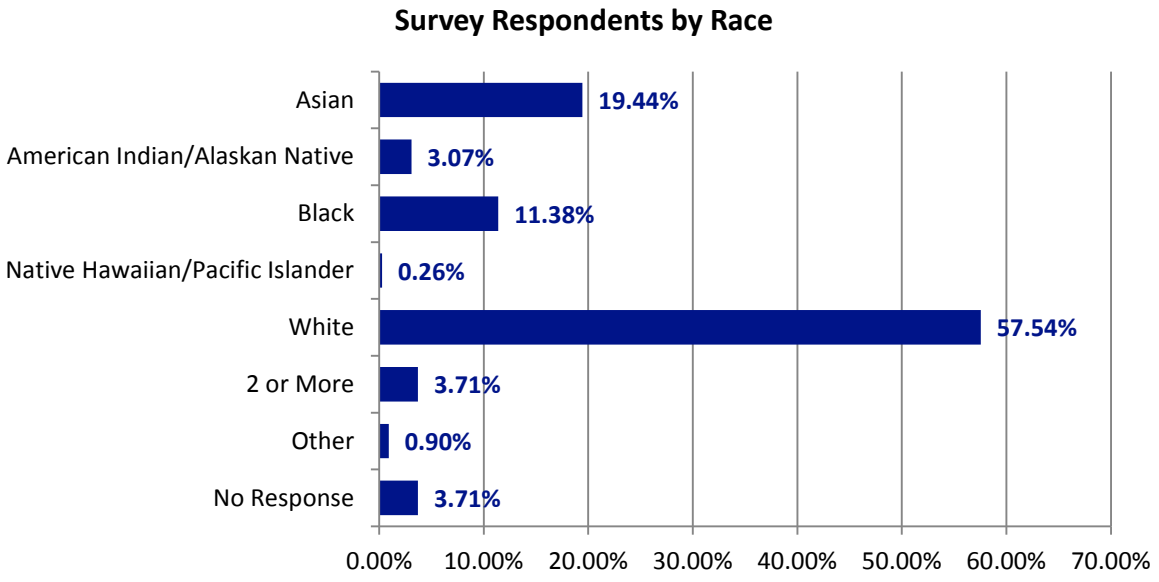


Figure 1. Survey Respondents by Race, 2016

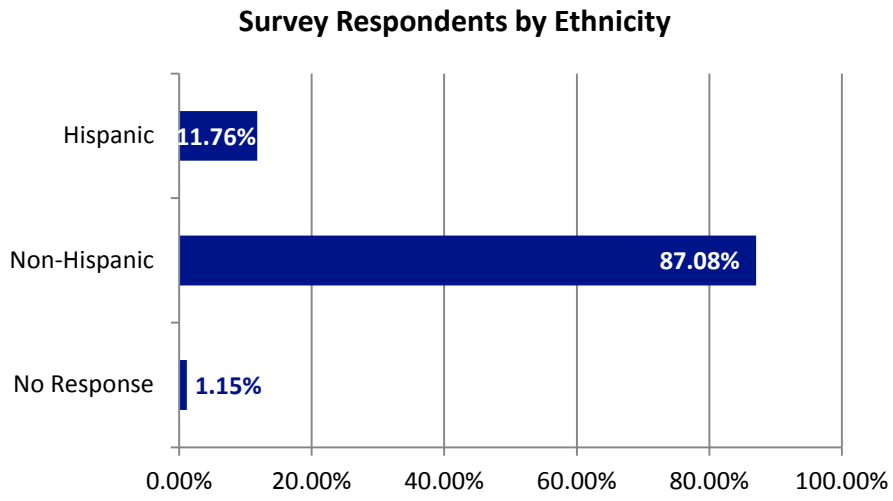


Figure 2. Survey Respondents by Ethnicity, 2016

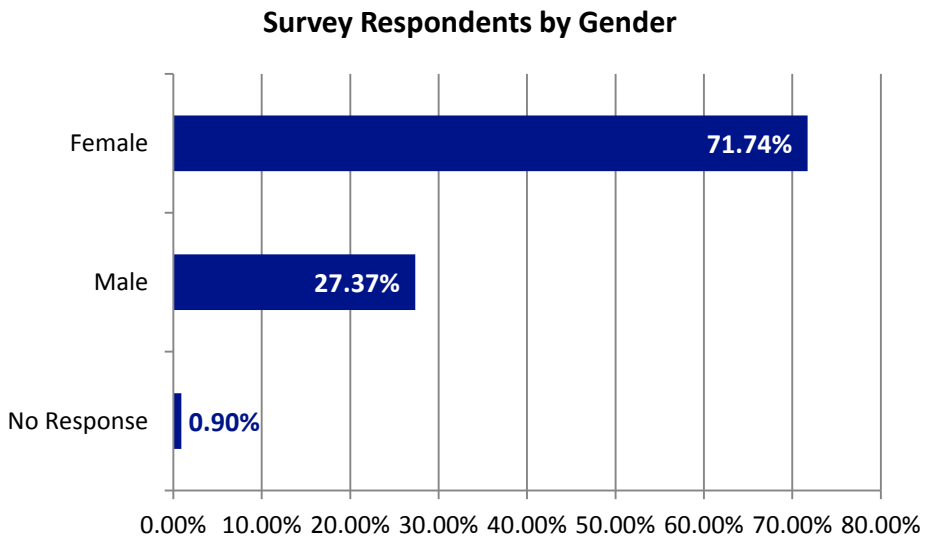


Figure 3. Survey Respondents by Gender, 2016

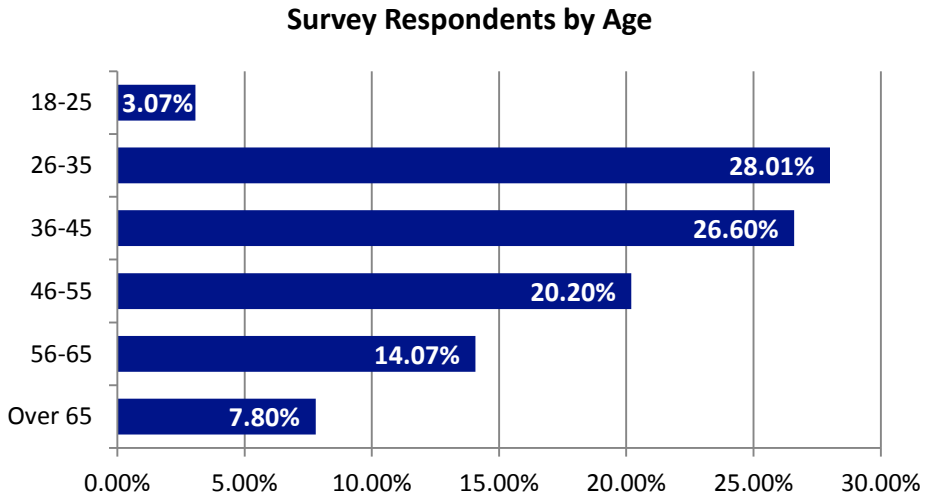


Figure 4. Survey Respondents by Age, 2016

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 more than 60 percent of the participants had at least a bachelor's degree or a post graduate degree.

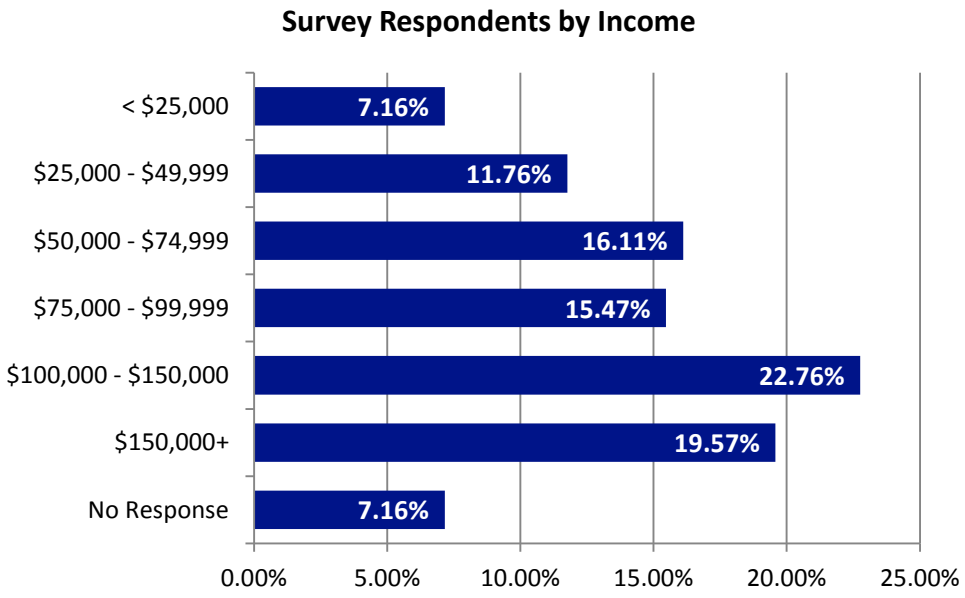


Figure 5. Survey Respondents by Annual Income, 2016

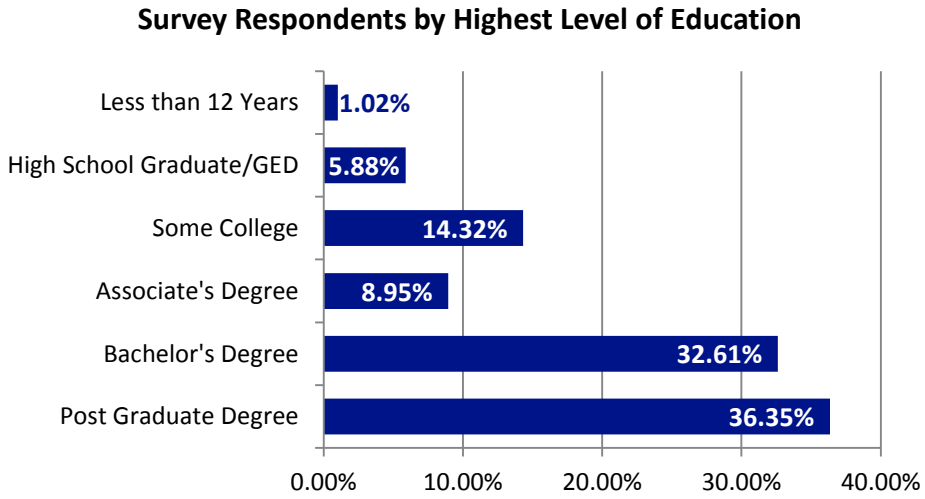


Figure 6. Survey Respondents by Highest Level of Education, 2016

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).

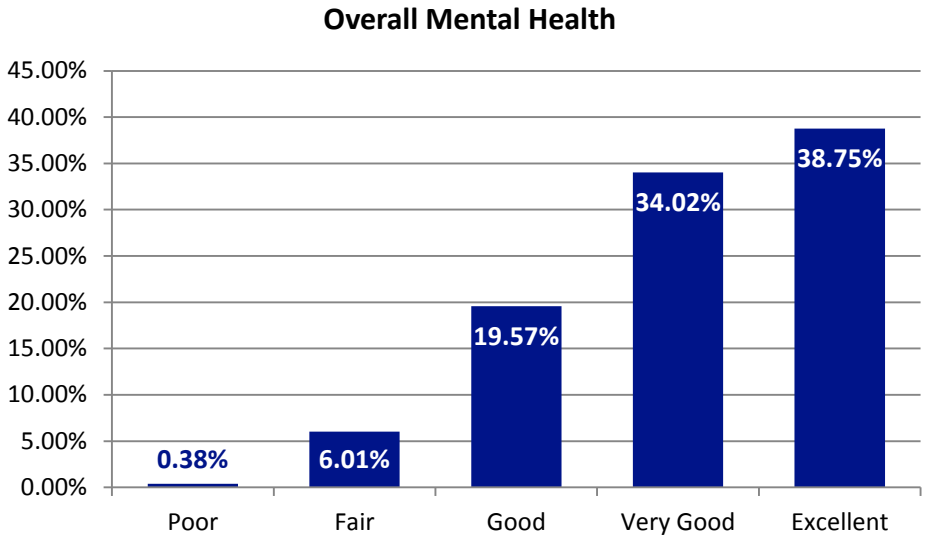


Figure 7. Survey Respondents' Self-Reported Overall Mental Health, 2016

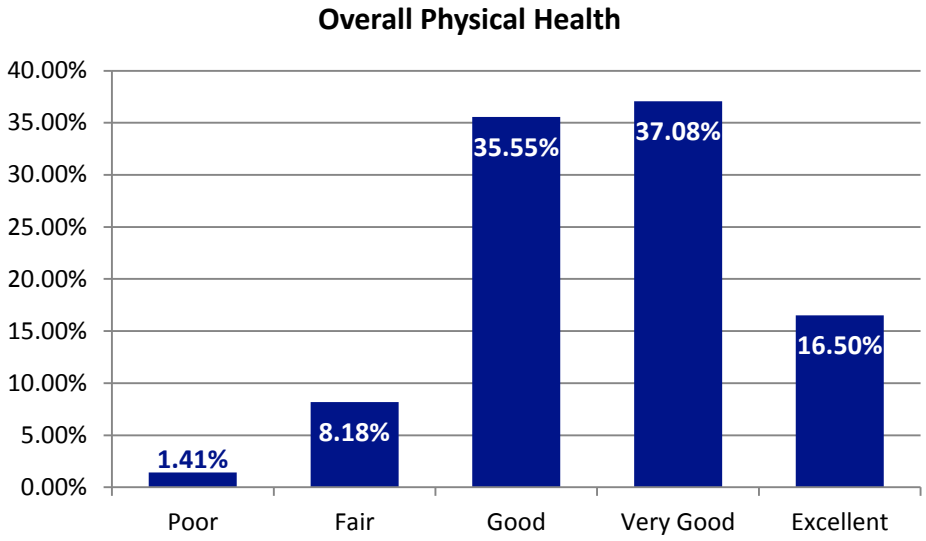


Figure 8. Survey Respondents' Self-Reported Overall Physical Health, 2016

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.

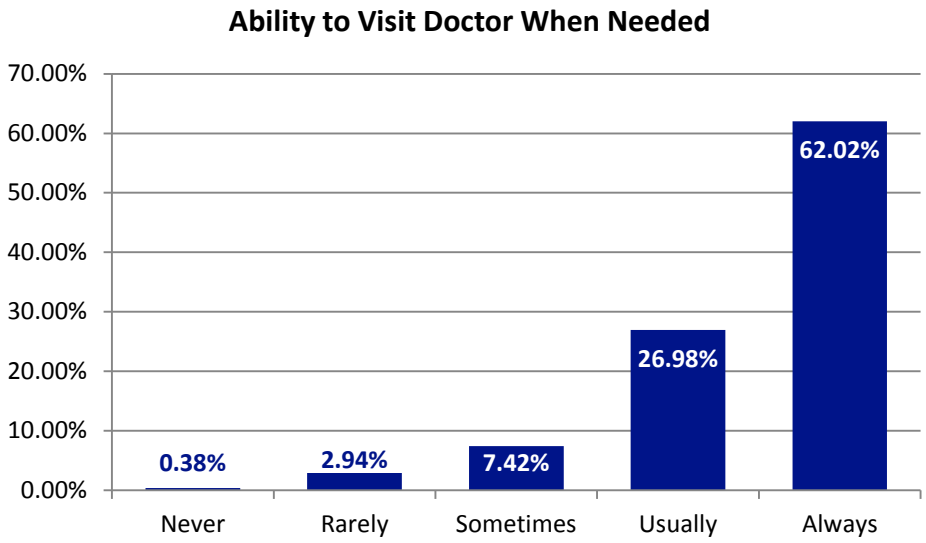


Figure 9. Survey Respondents' Self-Reported Ability to Visit Doctor When Needed, 2016

Reasons for Not Being Able to Visit Doctor	Number of Respondents
Busy work schedule/unable to take time off	142
I can't get an appointment quickly	125
I don't have a regular doctor	29
It's too expensive and I can't afford it	28
Unable to get childcare	16
I can't find a doctor who accepts my insurance	13
Doctor is not accepting new patients	13
I don't have transportation	11
I don't have health insurance	10
The doctor is too far away	5

Table 1. Survey Respondents' Reasons for Not Being Able to Visit Doctor When Needed, 2016

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	207
High Cholesterol	225
Obesity	174
Diabetes/High Blood Sugar	153

Table 2. Number of Survey Respondents at Risk for Various Health Conditions, 2016

When stratified by race, some disparities were evident among the participants' health status (Table 3). About 40 percent of the 89 Black participants reported having high blood pressure compared to 27.56 percent of the white participants. Approximately 31 percent of those who identified as two or more races reported being obese or overweight compared to around 27 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=450)	Black (n=89)	Asian (n=152)	Hispanics (n=92)	American Indian (n=24)	Native Hawaiian (n=2)	2 or More (n=29)	Other (n=7)
High Blood Pressure	27.56%	40.45%	17.76%	20.65%	29.17%	50%	27.59%	14.29%
Obesity	26.89%	30.33%	7.89%	17.39%	12.5%	0%	31.03%	0%
Diabetes	20.22%	22.47%	17.11%	18.48%	20.83%	0%	27.59%	28.57%
High Cholesterol	33.11%	23.6%	21.05%	28.26%	16.67%	0%	41.38%	28.57%

Table 3. Survey Respondents' Health Risks, 2016

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, 75 percent of the respondents had their last physical within the year prior to the survey, and almost 42 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	43.73%	31.71%	16.11%	4.73%	2.56%	0.38%	0.38%
Last Dental	54.60%	21.87%	13.17%	5.37%	3.20%	0.38%	0.90%
Last Mammogram	15.22%	14.45%	11.89%	3.84%	2.43%	17.77%	18.8%
Last Pap Smear	18.41%	26.73%	18.41%	3.58%	2.94%	1.02%	15.86%
Last Colon Screening	3.32%	6.14%	9.46%	12.40%	8.44%	42.71%	11.76%
Last Flu Shot	16.37%	58.31%	9.85%	3.32%	2.30%	7.03%	1.02%

Table 4. Survey Respondents' Health Maintenance History, 2016

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, 2016

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] 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

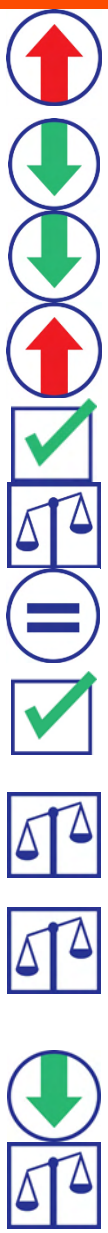
Part B:
Secondary Data Findings

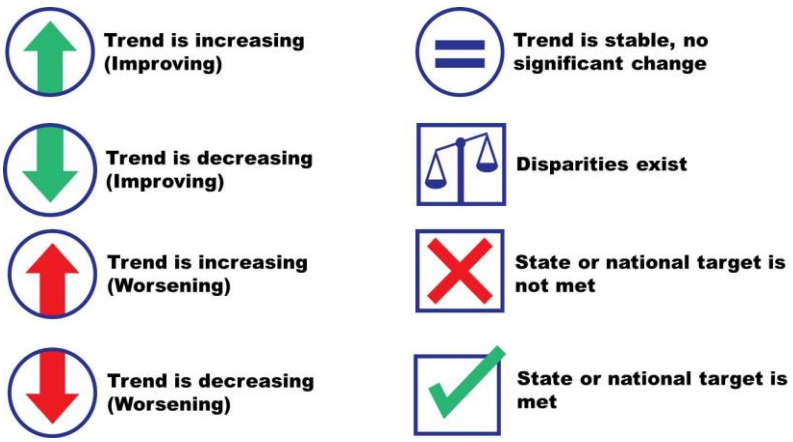
Chapter 1: Cancer

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.
- Montgomery County has met SHIP 2017 or HP 2020 targets for overall age-adjusted cancer mortality rates.
- In Montgomery County, whites and Blacks have the highest rates of cancer mortality, while Hispanics and Asian/Pacific Islanders have the lowest.
- Overall, breast cancer incidence rates in Montgomery County have been relatively steady since 2009.
- Montgomery County has met the HP 2020 targets for deaths due to breast cancer and lung cancer.
- For breast cancer, Black women have the highest mortality rate compared to other racial/ethnic groups. 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 Montgomery County. 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, prostate cancer and cervical cancer rates have been decreasing in Maryland and Montgomery County since 2009.
- The incidence of skin cancer, while relatively stable, is highest in whites.



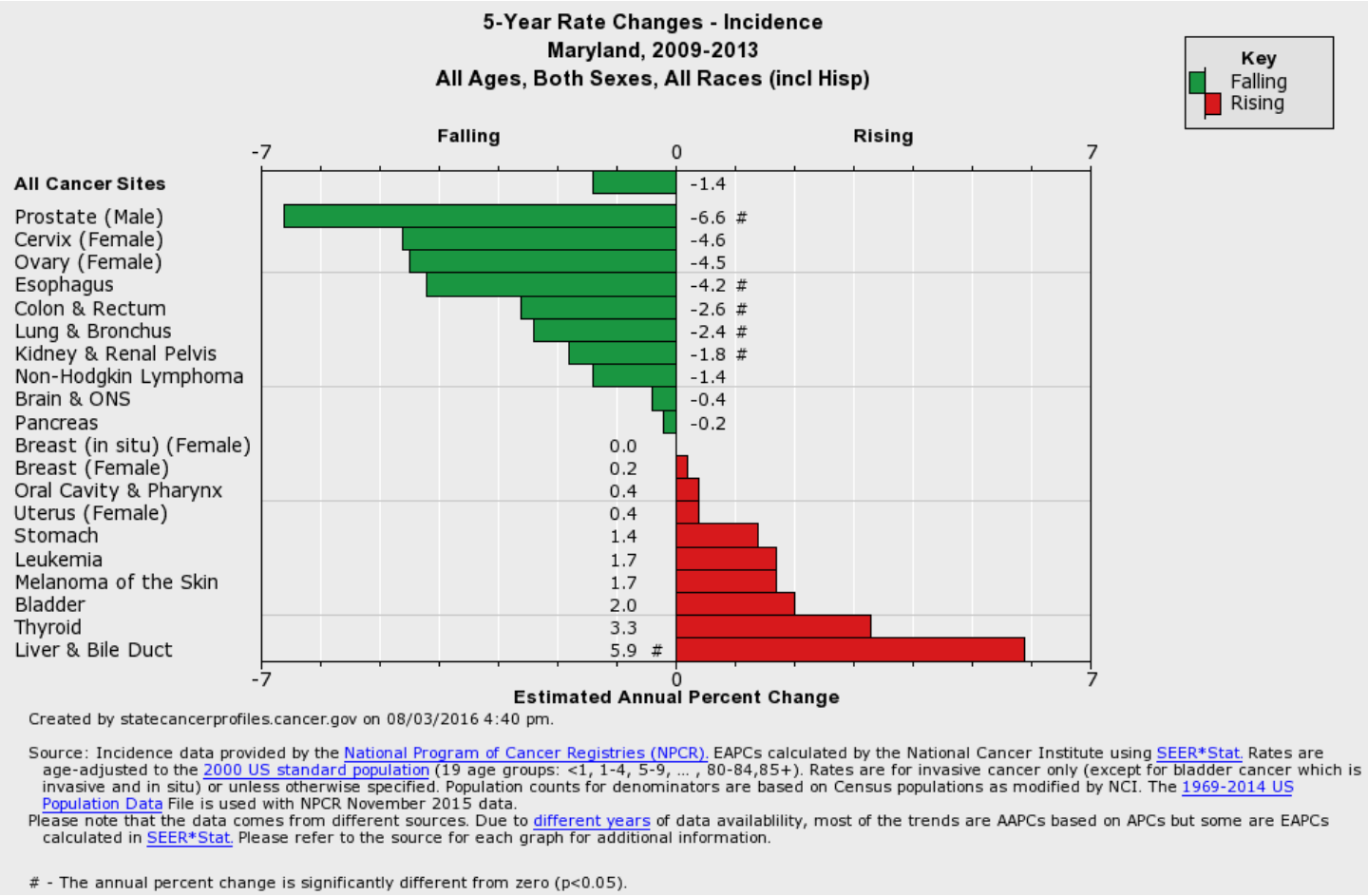


Cancer

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]

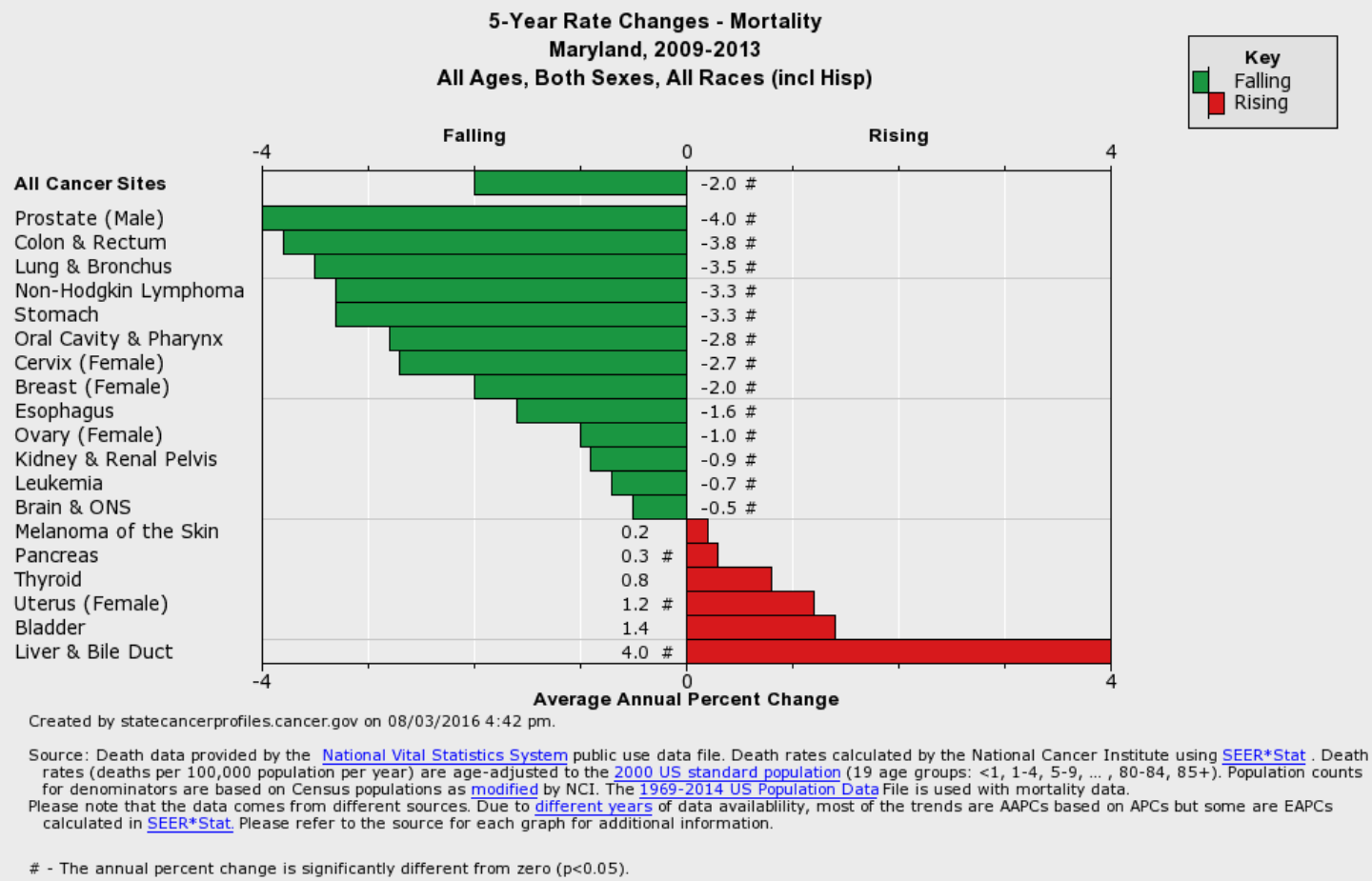
Cancer at the State Level



(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. Maryland as a whole, has met the SHIP and HP 2020 target for 2009–2013 (Figure 1).

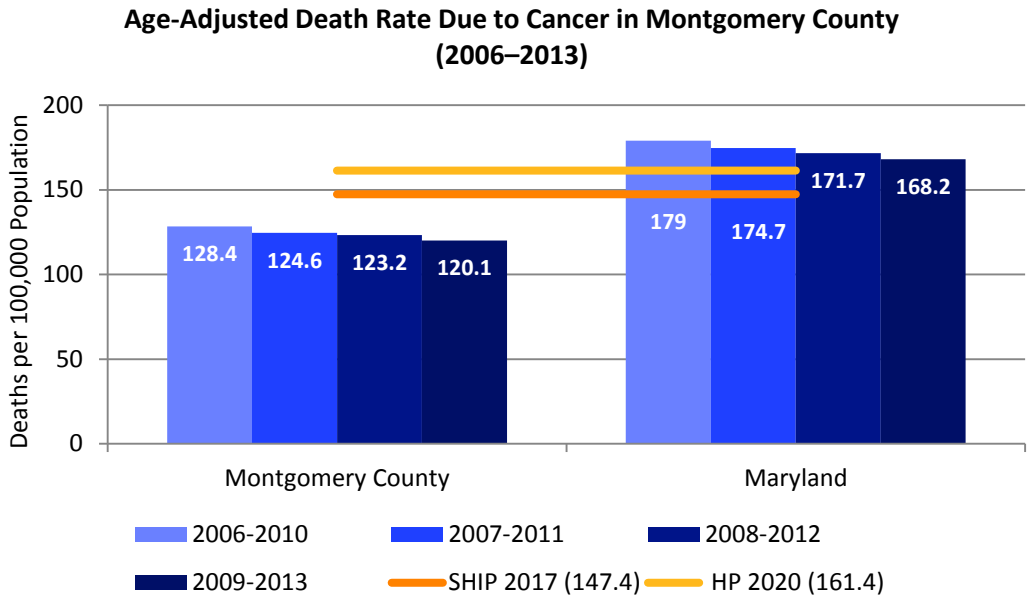


Figure 1. Age-Adjusted Death Rate per 100,000 Population due to Cancer in Montgomery County and Maryland, 2006–2013. (Sources: Healthy Montgomery. 2013)

In Montgomery County, males have a higher age-adjusted death rate compared to women (Figure 2).

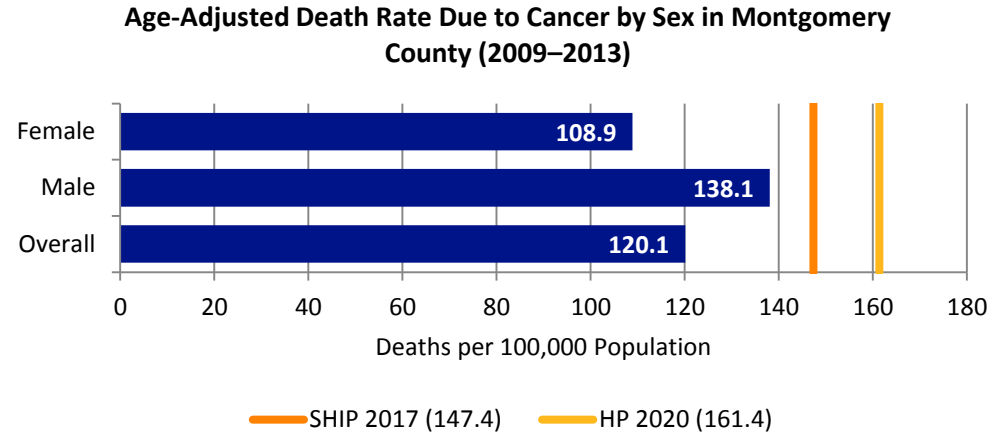


Figure 2. Age-Adjusted Death Rate per 100,000 Population due to Cancer by Sex in Montgomery County, 2009–2013. (Sources: Healthy Montgomery. 2013)

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 (Figure 3).

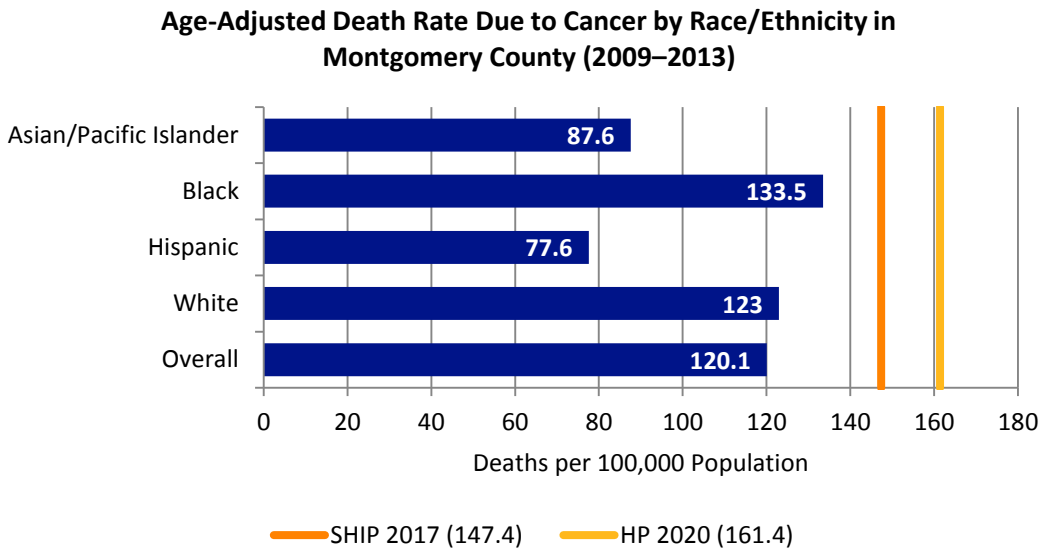


Figure 3. Age-Adjusted Death Rate per 100,000 Population due to Cancer by Race/Ethnicity in Montgomery County, 2009–2013. (Sources: Healthy Montgomery. 2013)

The number of Medicare Beneficiaries that were treated in Maryland as a whole has decreased since 2012 to 2014, demonstrating a similar trend in Montgomery County (slightly level for the past two years). Montgomery County and Maryland have demonstrated similar decreases each year in percentages of Medicare Beneficiaries treated for cancer since 2012. Nevertheless, in 2014, Montgomery County had a lower percentage of Medicare Beneficiaries treated for cancer than Maryland (Figure 4).

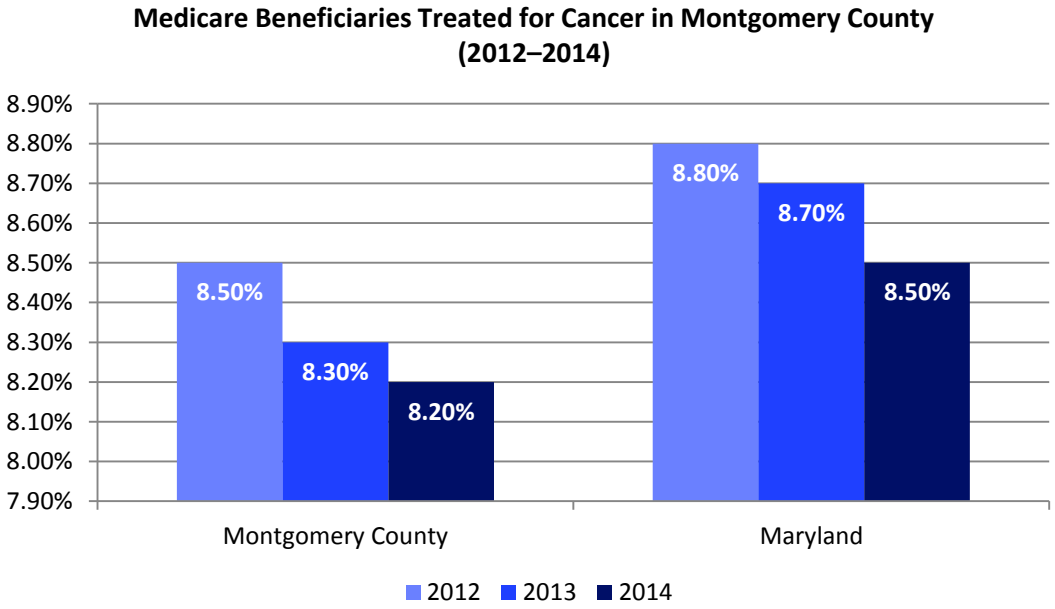


Figure 4. Percent of Medicare Beneficiaries that were Treated for Cancer in Montgomery County and Maryland, 2012–2014. (Sources: Healthy Montgomery. 2014)

1.1 Breast Cancer

Incidence

Montgomery County has maintained moderately stable incidence rates of breast cancer and Maryland overall has demonstrated a slight increasing trend in incidence (Figure 5).

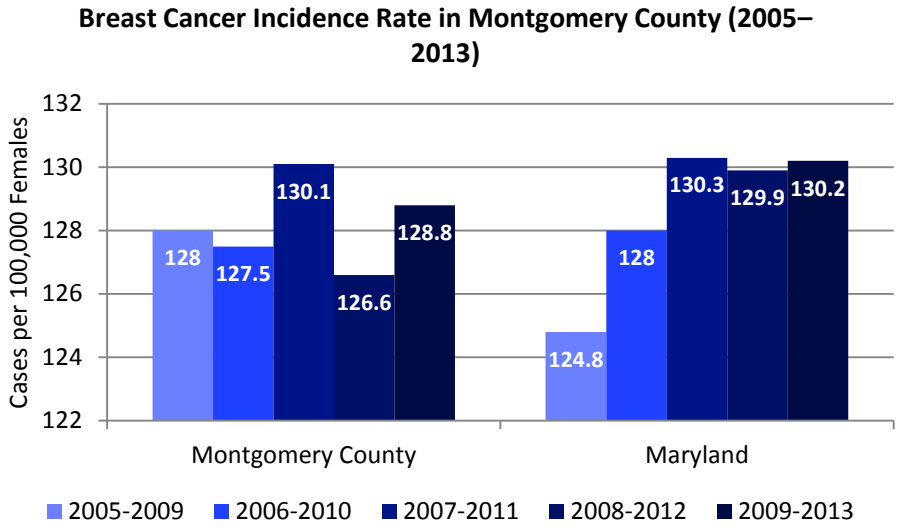


Figure 5. Age-Adjusted Incidence Rate for Breast Cancer in Cases per 100,000 Females in Montgomery County and Maryland, 2005–2013.

(Sources: Healthy Montgomery. 2013)

Montgomery County has a slightly higher incidence rate overall. The racial/ethnic groups with the highest incidence rates for breast cancer include both white and Black while Hispanic has the lowest incidence rate (Figure 6).

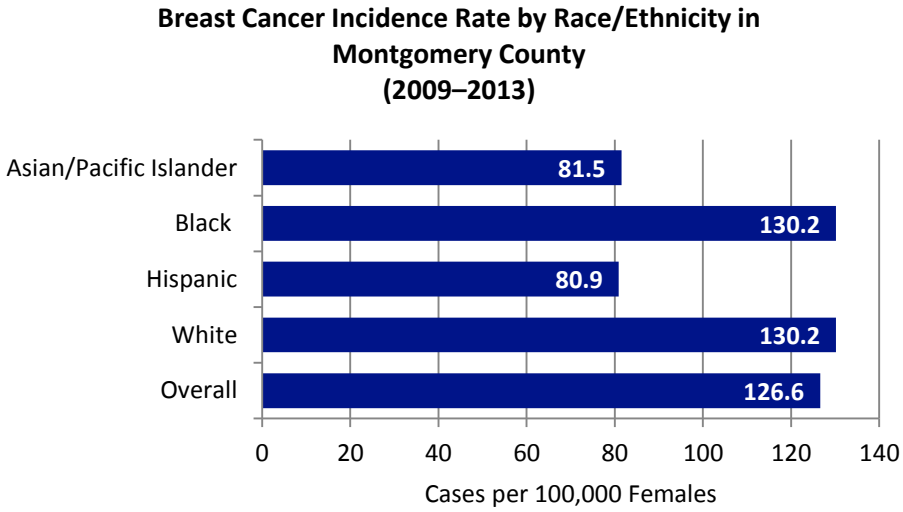


Figure 6. Age-Adjusted Incidence Rate for Breast Cancer in Cases per 100,000 Females by Race & Ethnicity in Montgomery County, 2009–2013.

(Sources: Healthy Montgomery. 2013)

Mortality

Montgomery County and the state have been on a general downward trend in recent years. Maryland has yet to achieve the HP 2020 target. Montgomery County has surpassed the target since 2006 consistently (Figure 7).

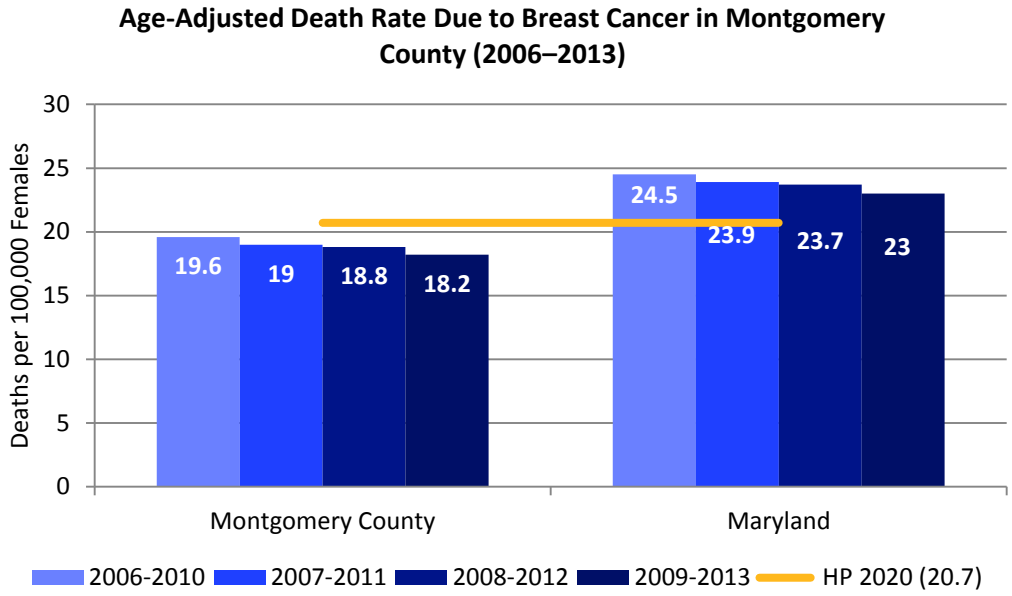


Figure 7. Age-Adjusted Death Rate per 100,000 Females due to Breast Cancer in Montgomery County and Maryland, 2006–2013. (Sources: Healthy Montgomery. 2013)

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 (Figure 8).

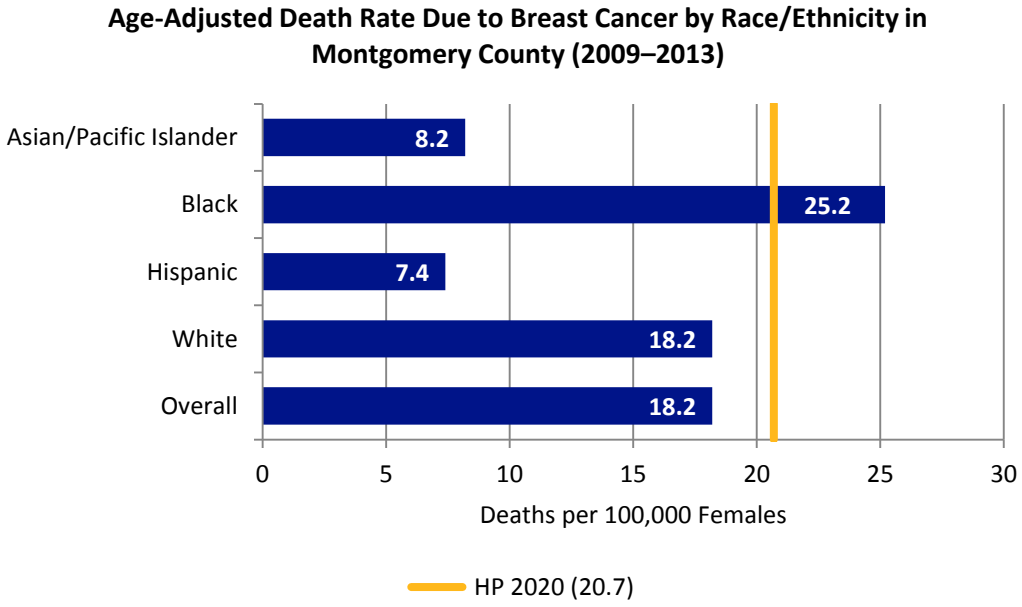


Figure 8. Age-Adjusted Death Rate per 100,000 Females by Race & Ethnicity in Montgomery County, 2009–2013. (Sources: Healthy Montgomery. 2013)

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 Maryland. Maryland has screened a slightly larger percentage than Montgomery County in 2014 (Figure 9).

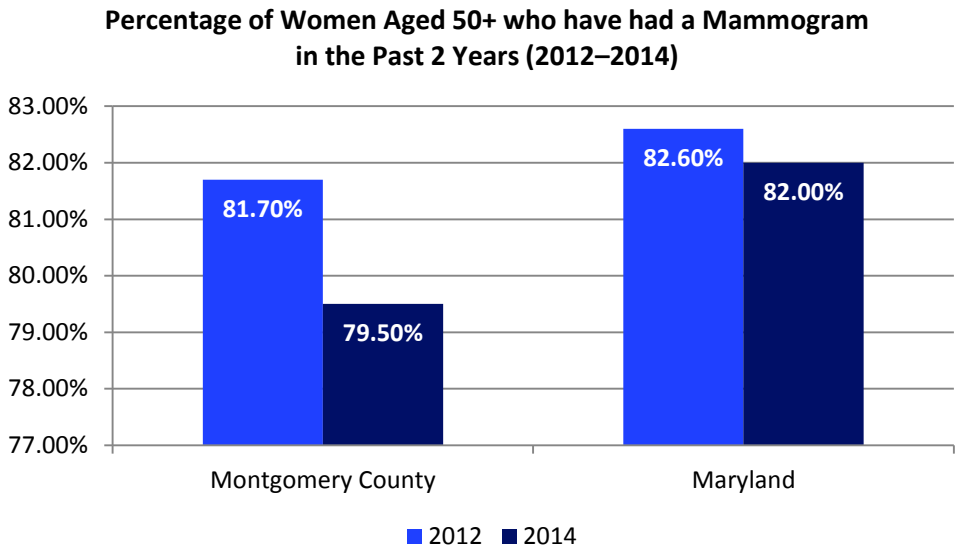


Figure 9. Percentage of Women aged 50 and over who have had a Mammogram in the Past Two Years in Montgomery County and Maryland, 2012–2014.
(Sources: Healthy Montgomery. 2014)

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. The percentages of individuals in both 65+ and 50–64 age brackets were somewhat consistent with the overall screening rates, being about 2.0 percent above or below the overall percentage (Figure 10).

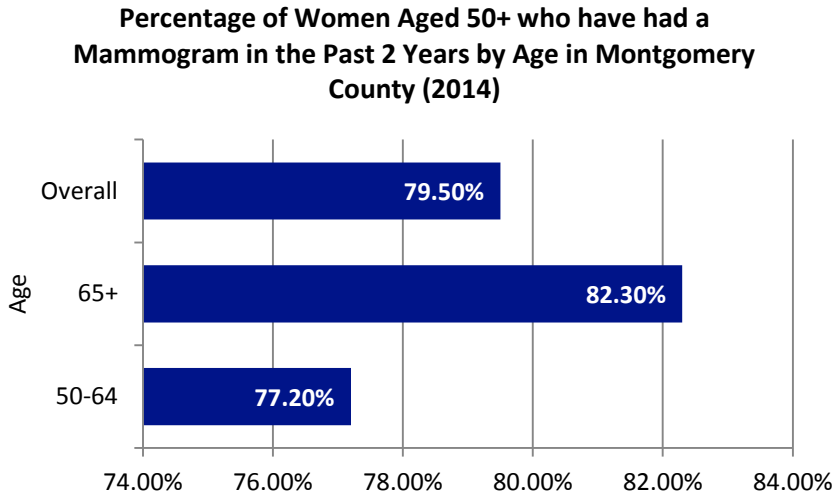


Figure 10. Percentage of Women aged 50+ who have had a Mammogram in the Past Two Years by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

When evaluating mammography by Race/Ethnicity, in 2014, Montgomery County demonstrated the highest percentage group as being Hispanic, followed by white and Black (at about the same percentage), then Asian and then other (Figure 11).

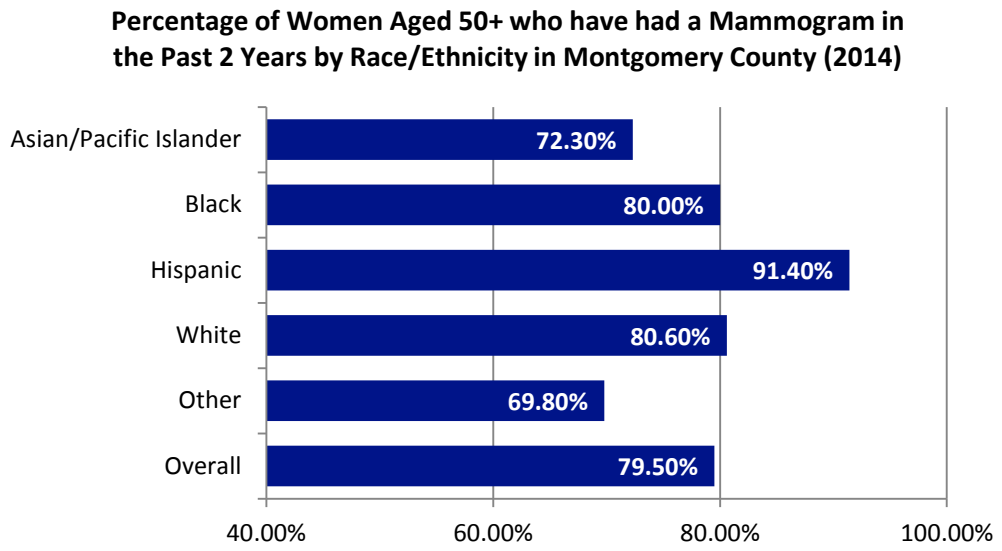


Figure 11. Percentage of Women aged 50 + who have had a Mammogram in the Past Two Years by Race/Ethnicity in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

1.2 Lung Cancer

Incidence

For the State of Maryland and Montgomery County, the incidence rates of lung and bronchus cancer have decreased since 2006. Montgomery County boasts lower incidence rates than Maryland (Figure 12).

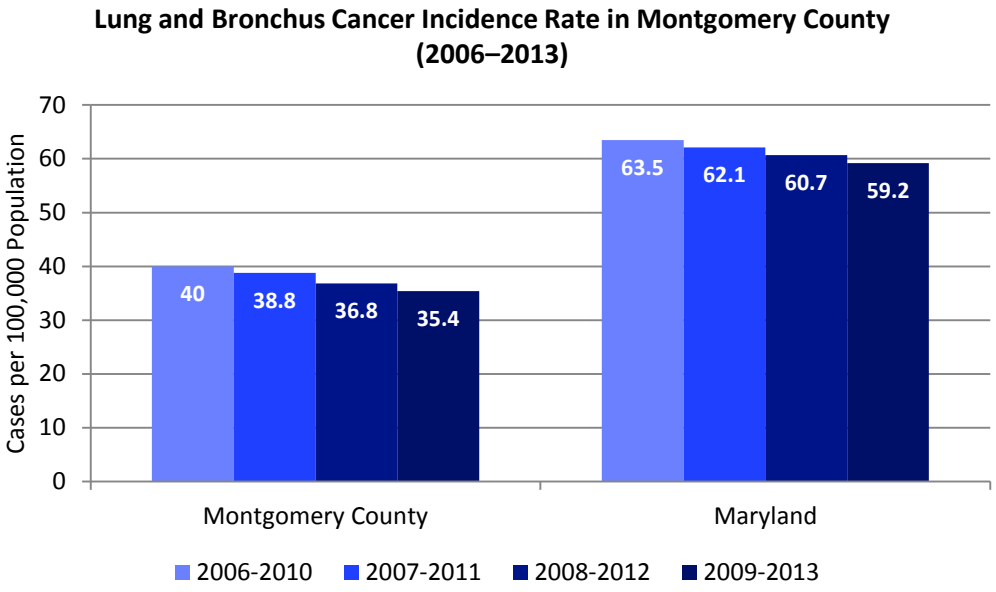


Figure 12. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population in Montgomery County and Maryland, 2006–2013.
(Sources: Healthy Montgomery. 2013)

Incidence rates of lung and bronchus cancer by sex show a slightly different picture. In Montgomery County, men have a higher incidence rate than women due (Figure 13).

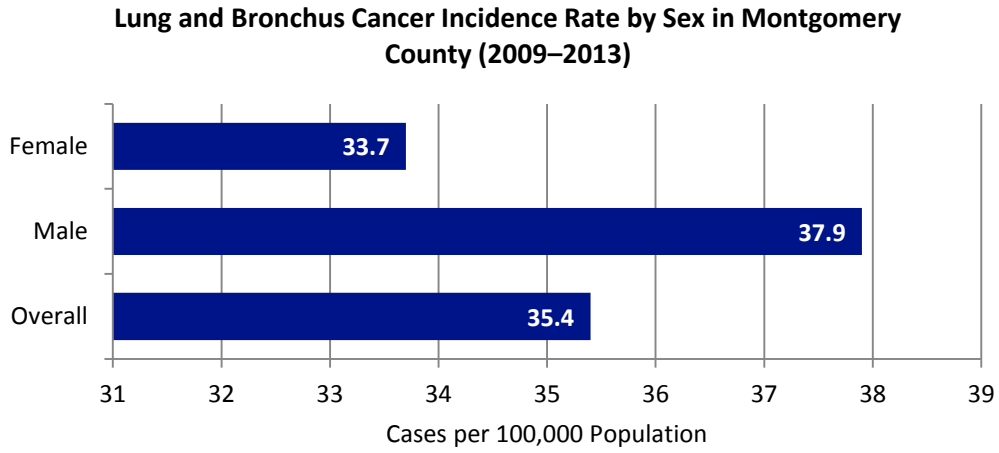


Figure 13. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

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. The incidence rate for Hispanics is lower than the overall incidence rate for the county (Figure 14).

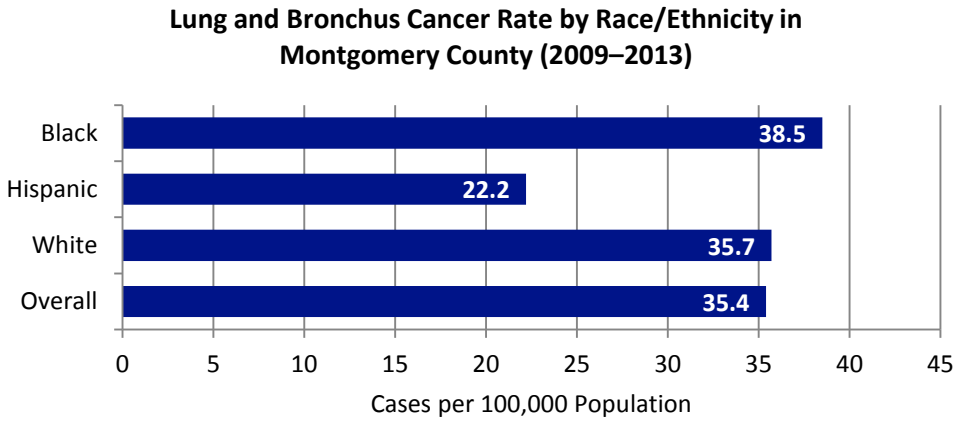


Figure 14. Age-Adjusted Incidence Rate for Lung and Bronchus Cancers in Cases per 100,000 Population by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

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 has also demonstrated decreased death rates, and has achieved the HP 2020 target since 2006. Montgomery County has much lower death rates due to lung cancer as compared to the rest of the State (Figure 15).

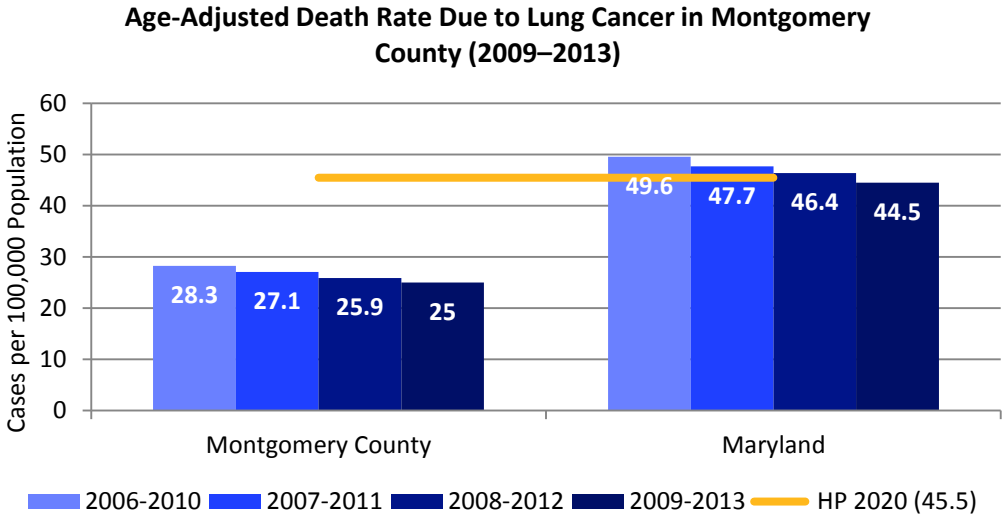


Figure 15. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population in Montgomery County and Maryland, 2006–2013.
(Sources: Healthy Montgomery. 2013)

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 (Figure 16).

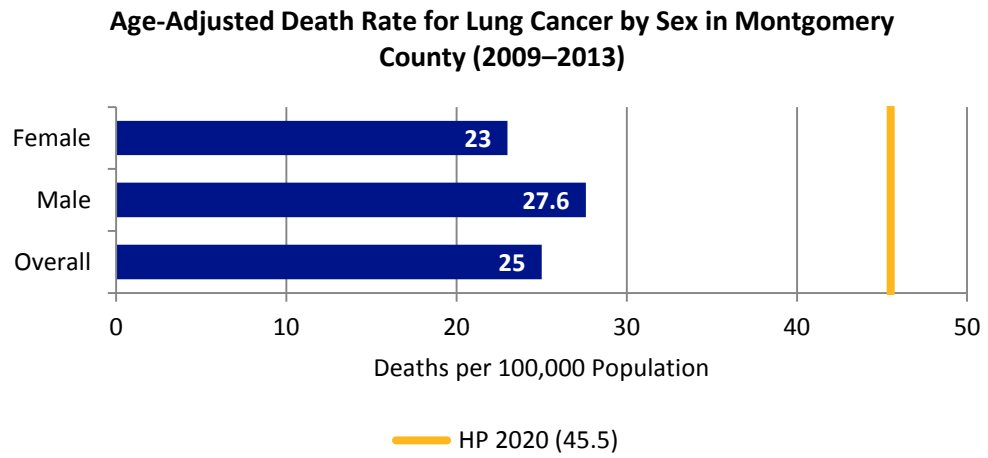


Figure 16. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population by Sex in Montgomery County, 2009–2013. (Sources: Healthy Montgomery. 2013)

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 (Figure 17).

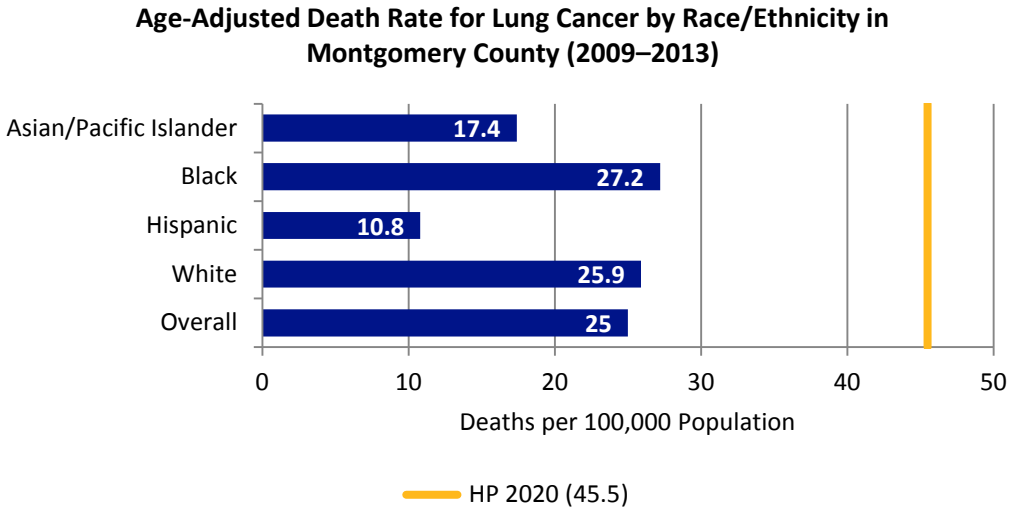


Figure 17. Age-Adjusted Death Rate for Lung Cancers per 100,000 Population County by Race/Ethnicity in Montgomery, 2009–2013. (Sources: Healthy Montgomery. 2013)

1.3 Colorectal Cancer

Incidence

Colorectal Cancer incidence rates have declined in both Montgomery County and the State of Maryland since 2006. For the 2009–2013 reporting period, Montgomery 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 Maryland (Figure 18).

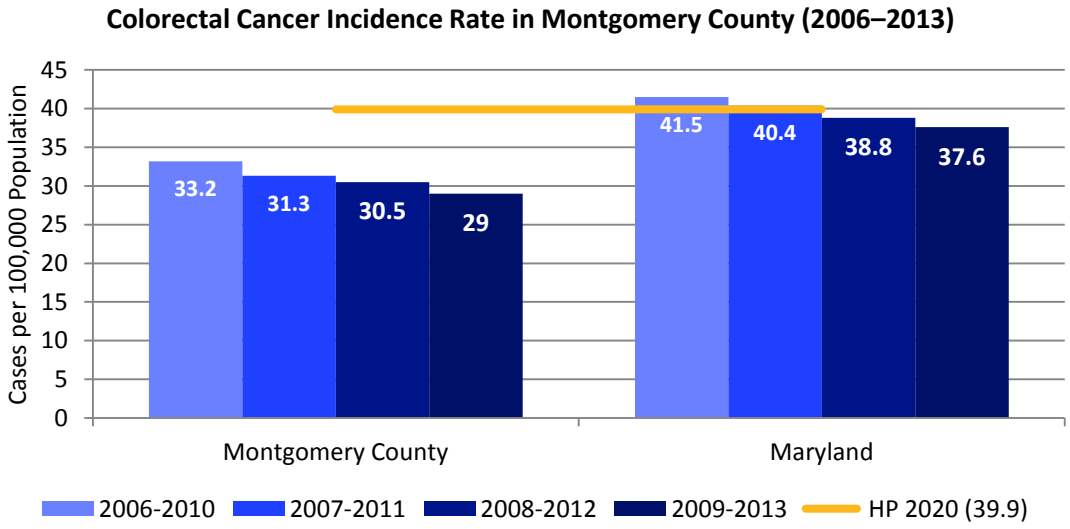


Figure 18. Age-Adjusted Incidence Rate for Colorectal Cancer in Cases per 100,000 Population in Montgomery County and Maryland, 2006–2013.
(Sources: Healthy Montgomery. 2013)

When looking at incidence rates broken down by sex, males in Montgomery County demonstrated higher incidence for colorectal cancer than did females. Montgomery County rates for both sexes have met the HP 2020 target (Figure 19).

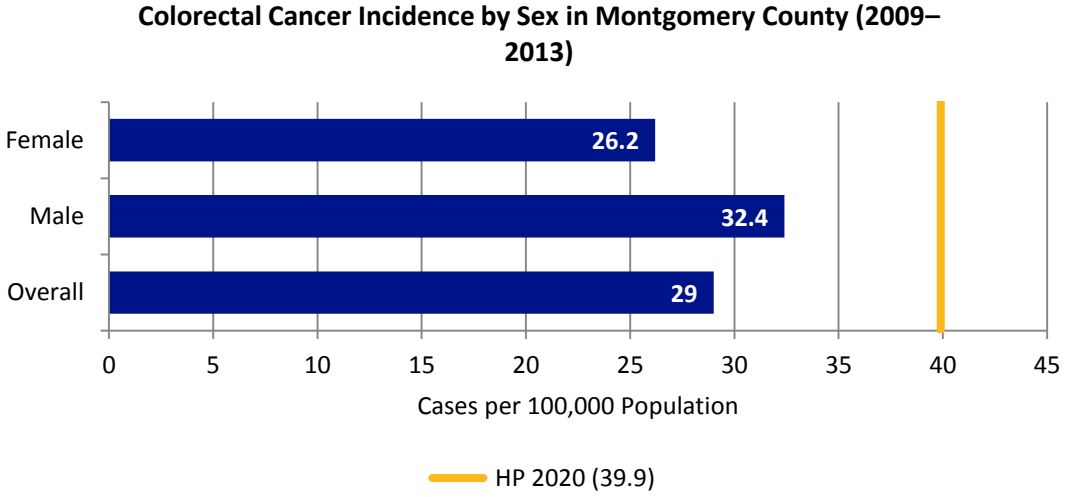


Figure 19. Colorectal Cancer Incidence Rate in Cases per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

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. Blacks have the highest incidence rates, followed by whites, Asians/Pacific Islanders and Hispanics (Figure 20).

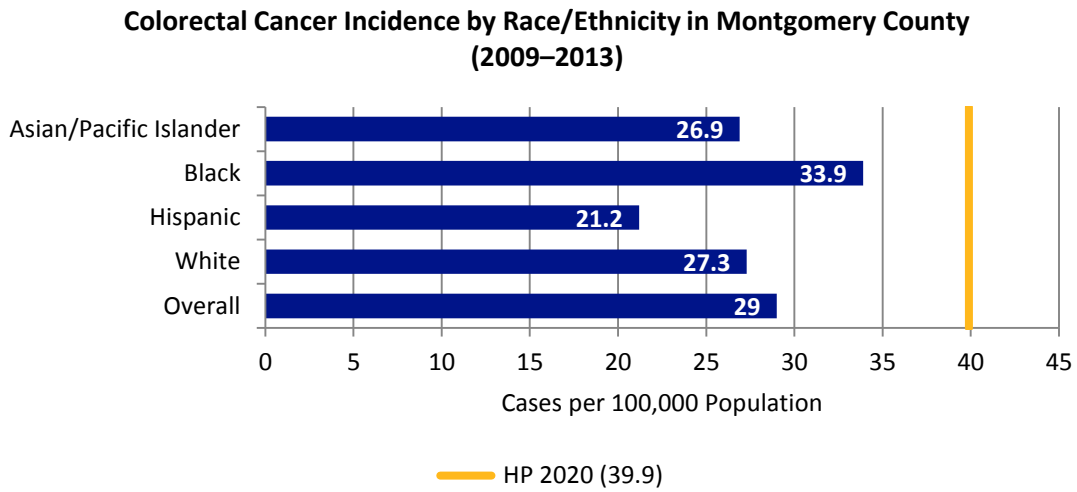


Figure 20. Colorectal Cancer Incidence Rate in Cases per 100,000 Population by Race/Ethnicity in Montgomery County, 2009–2013. (Sources: Healthy Montgomery. 2013)

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 (Figure 21).

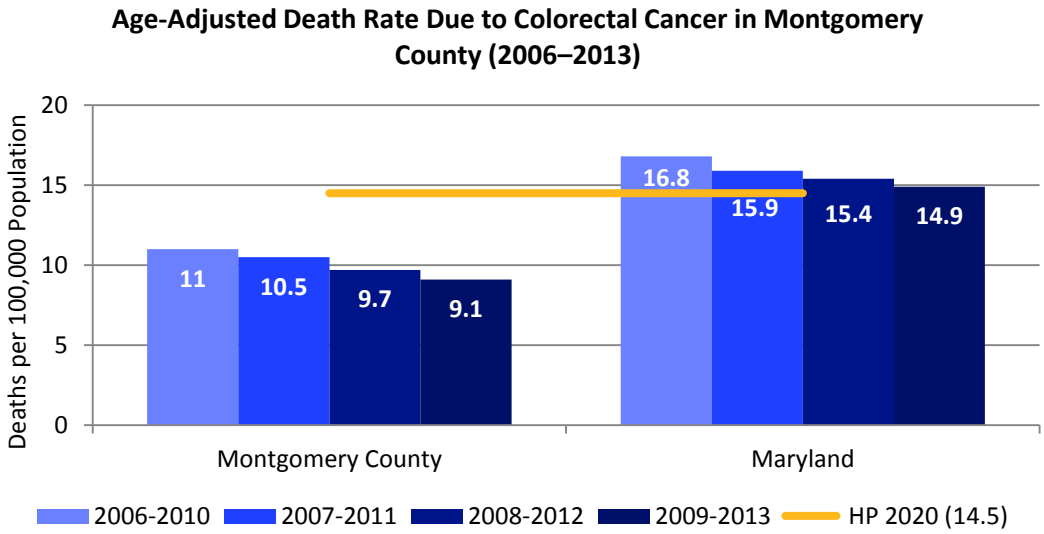


Figure 21. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population in Montgomery County and Maryland, 2006–2013.

(Sources: Healthy Montgomery. 2013)

Examining death rates due to Colorectal Cancer by sex, males in Montgomery County have higher death rates, but both sexes met the HP 2020 target (Figure 22).

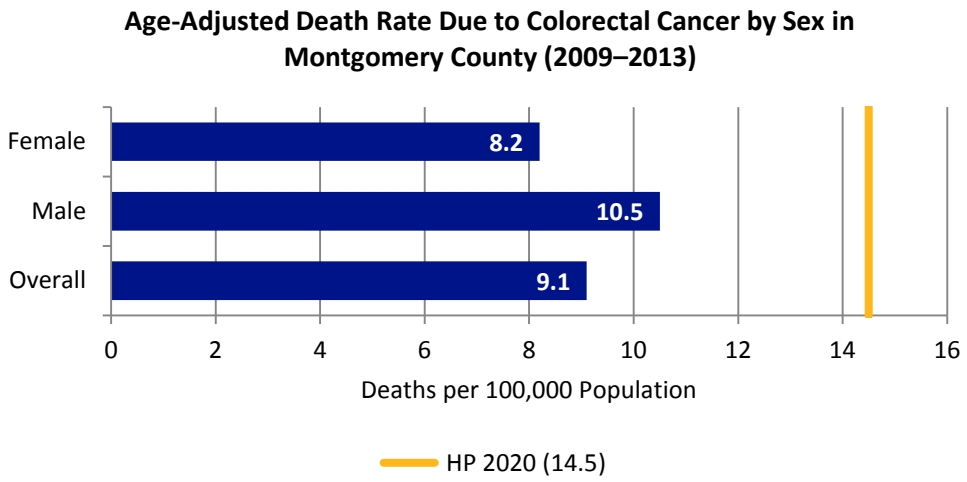


Figure 22. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population by Sex in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

Examining death rates due to Colorectal Cancer by race/ethnicity, Montgomery County Blacks 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 (Figure 23).

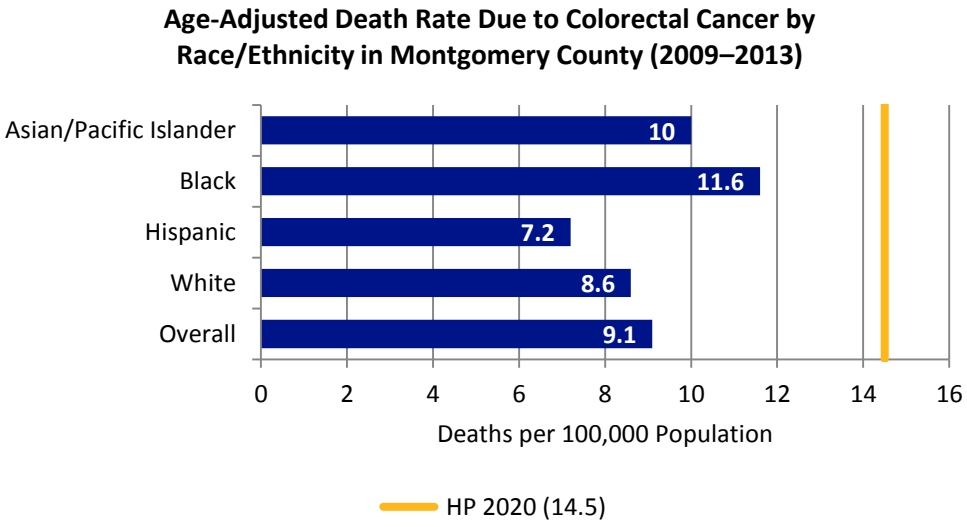


Figure 23. Age-Adjusted Death Rate due to Colorectal Cancer per 100,000 Population by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

Screening

In terms of 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 (Figure 24).

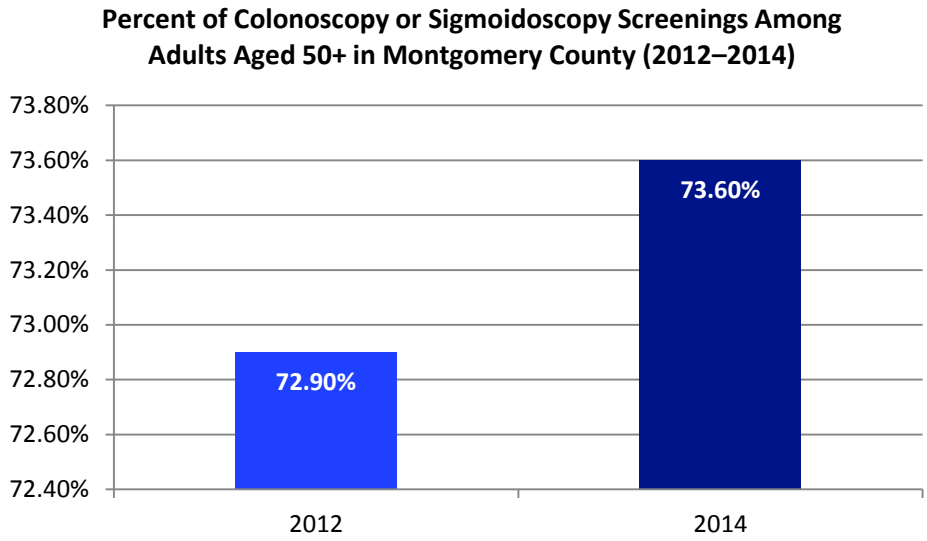


Figure 24. Percentage of Adults aged 50 and Over who have ever had a Sigmoidoscopy or Colonoscopy Exam in Montgomery County, 2012–2014.

(Sources: Healthy Montgomery. 2014)

In Montgomery County, adults aged 65+ contributed a larger percentage of colonoscopy or sigmoidoscopy screenings than their 50–64 year old counterparts. Additionally, the 65+ groups had higher percentages of screening than the county overall (Figure 25).

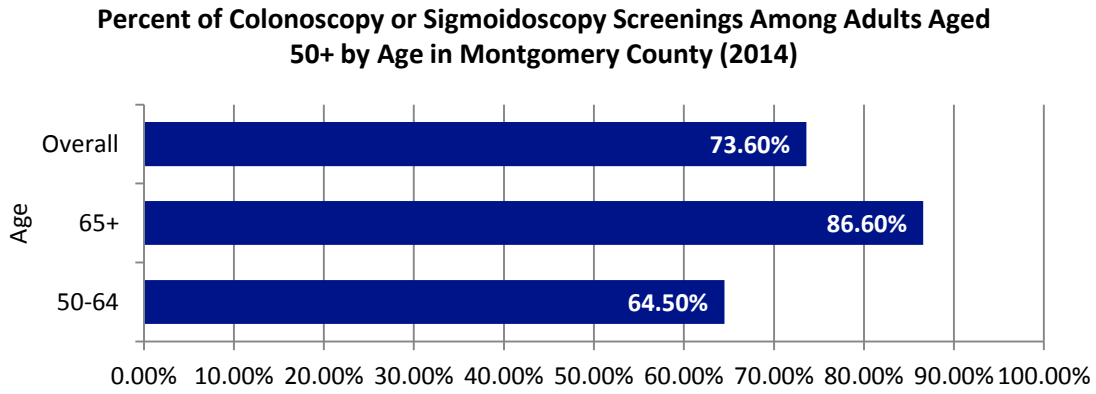


Figure 25. Percentage of Adults aged 50 and over that have ever had a Sigmoidoscopy or Colonoscopy Exam by Age in Montgomery County, 2014.

(Sources: Healthy Montgomery. 2014)

In Montgomery County, there is a higher percentage of females than males receiving the screening. Additionally, females had higher percentage of screening than the overall percentage (Figure 26).

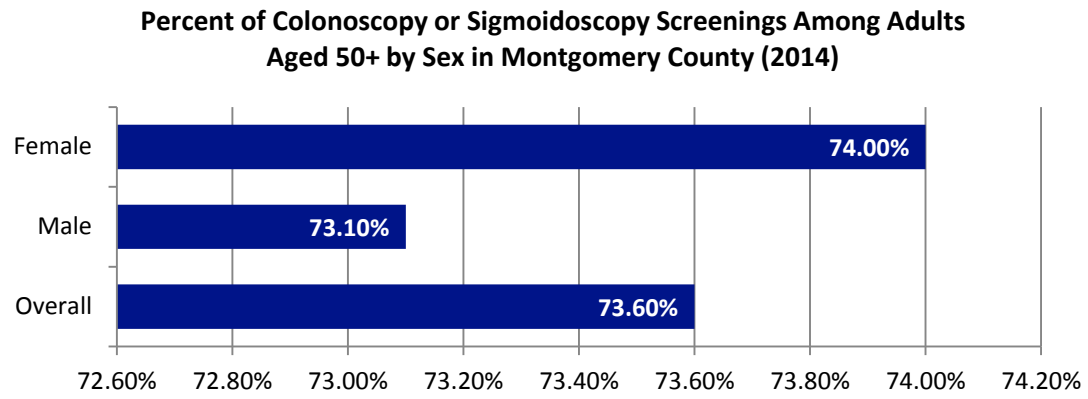


Figure 26. Percentage of Adults aged 50+that have ever had a Sigmoidoscopy or Colonoscopy Exam by Sex in Montgomery County, 2014.

(Sources: Healthy Montgomery. 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 (Figure 27).

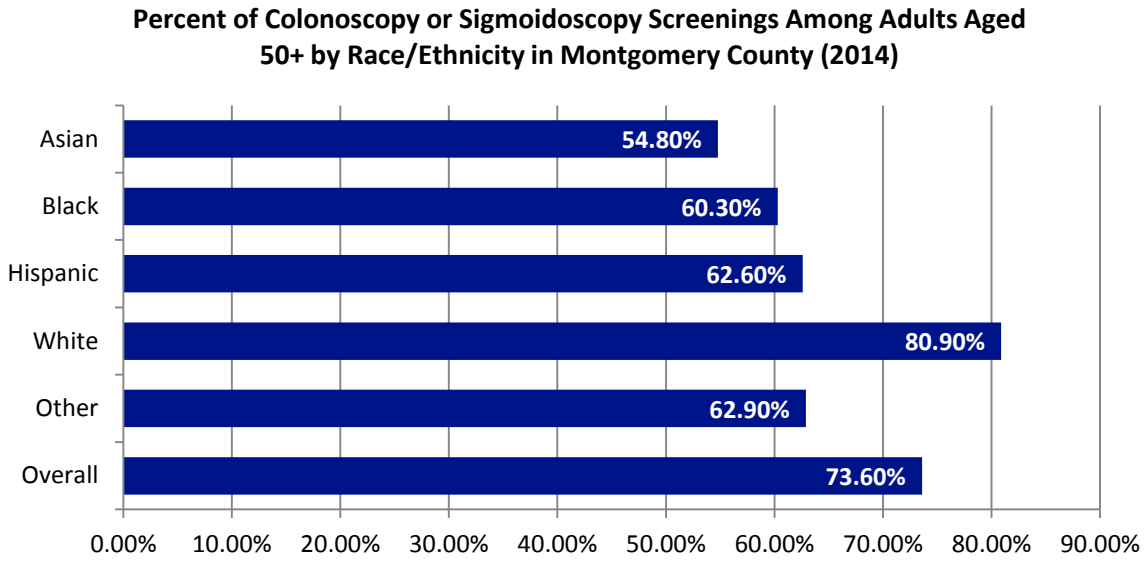


Figure 27. Percentage of Adults aged 50+ that have ever had a Sigmoidoscopy or Colonoscopy Exam by Race/Ethnicity in Montgomery County, 2014.

(Sources: Healthy Montgomery. 2014)

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 28).

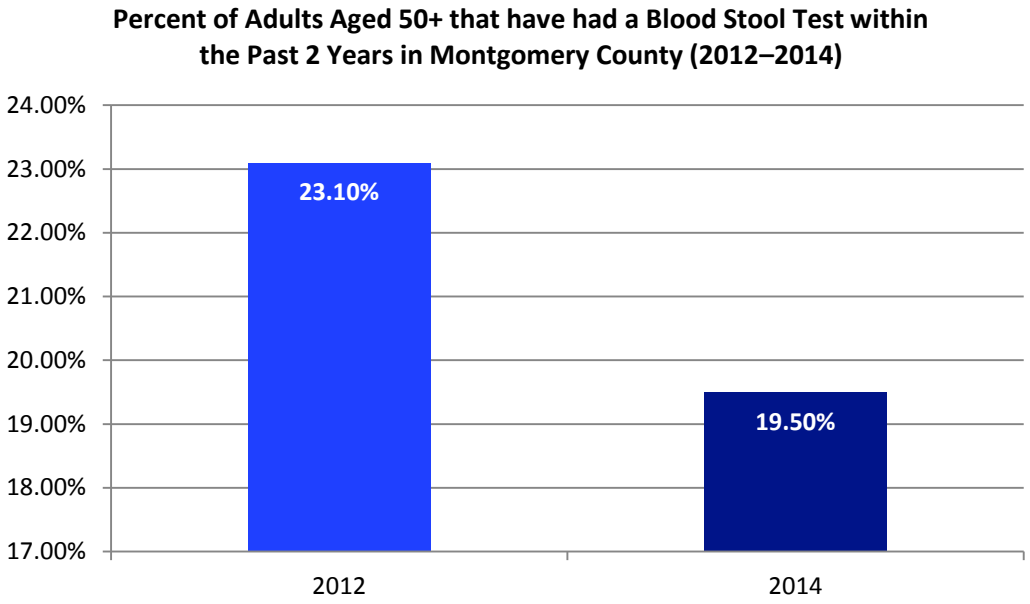


Figure 28. Percentage of Adults aged 50+ that have ever had a Blood Stool Test within the Past 2 Years in Montgomery County, 2012–2014.
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

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 29 and Figure 30).

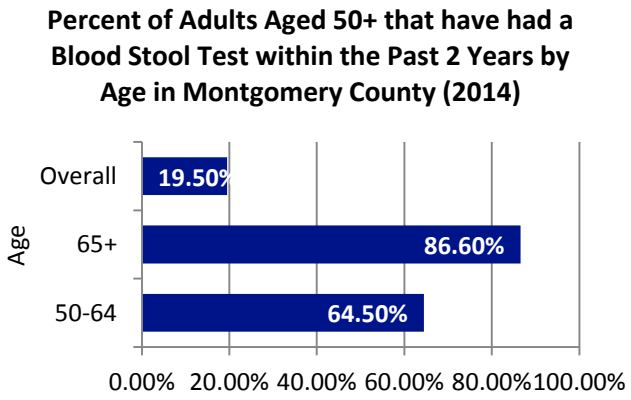


Figure 29. Percentage of Adults aged 50+ that have ever had a Blood Stool Test within the Past 2 Years by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

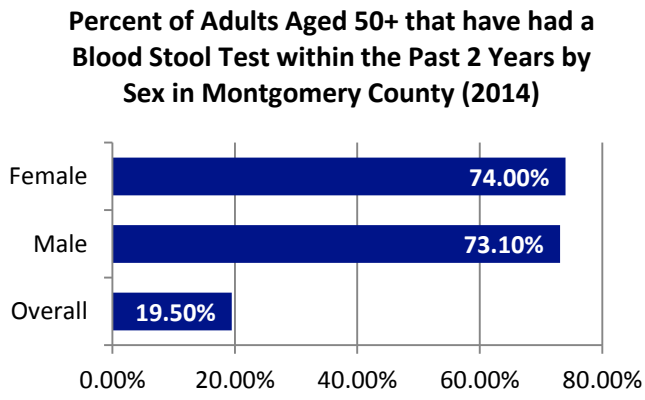


Figure 30. Percentage of Adults aged 50+ that have ever had a Blood Stool Test within the Past 2 Years by Sex in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

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 31).

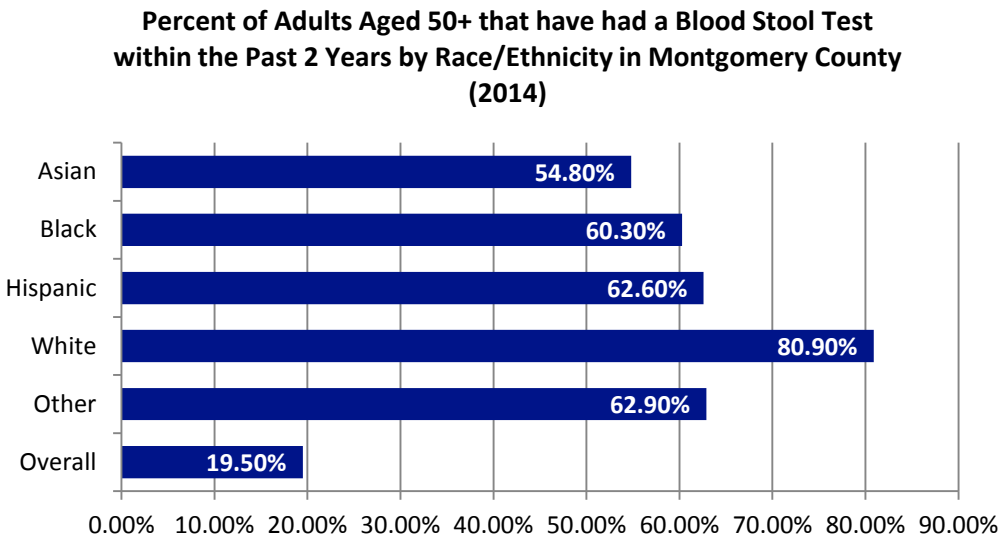


Figure 31. Percentage of Adults aged 50 and over that have ever had a Blood Stool Test within the Past 2 Years y Race/Ethnicity in Montgomery County b, 2014. (Sources: Healthy Montgomery. 2014)

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. The county demonstrates the lowest incidence rates for prostate cancer in comparison with the state over all (Figure 32).

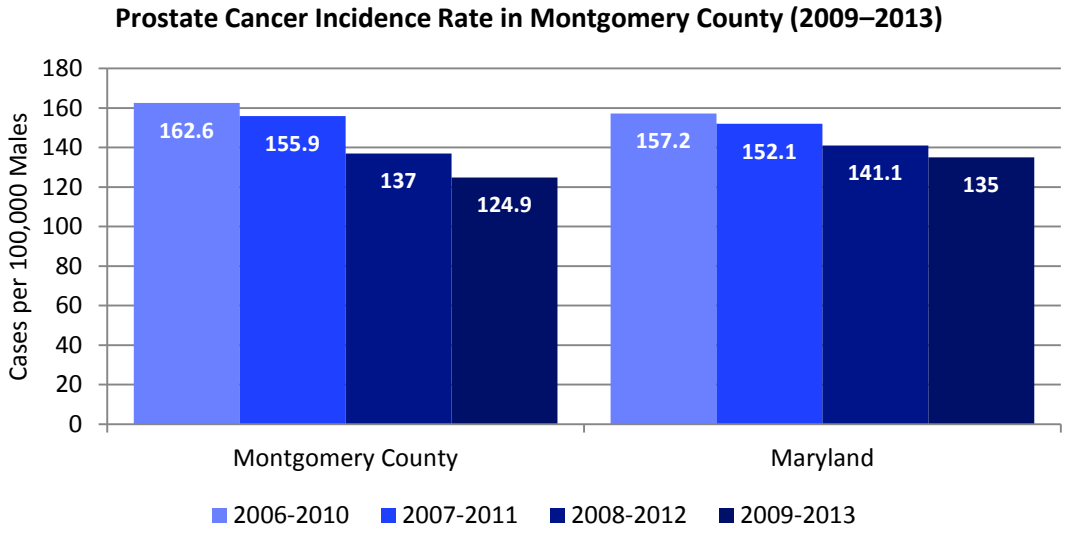


Figure 32. Age-Adjusted Incidence Rate for Prostate Cancer in Cases per 100,000 Males in Montgomery County and Maryland, 2009–2013.

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

For Montgomery County, Blacks have the highest incidence rates for Prostate Cancer, and the rates are much higher than the overall incidence rates for the county. This is then followed by white and then Hispanic (Figure 33).

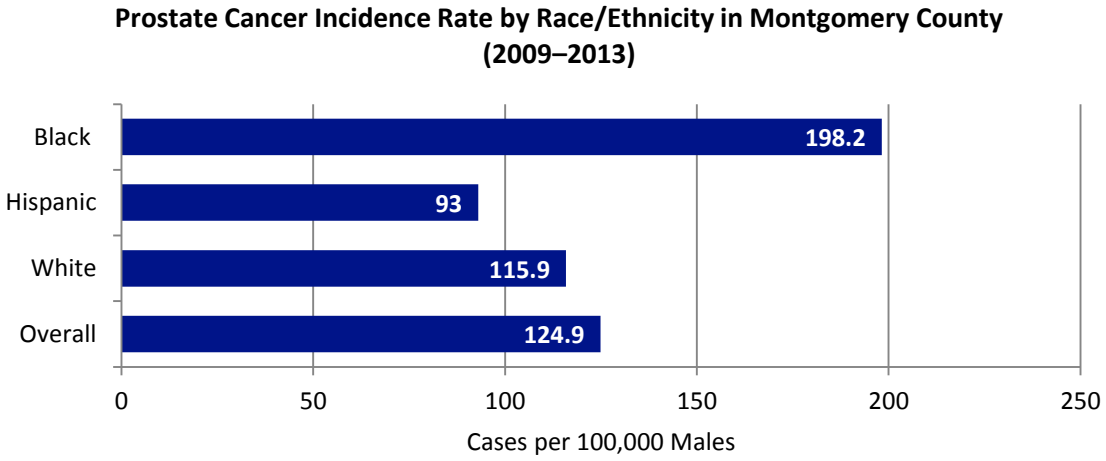


Figure 33. Age-Adjusted Incidence Rate for Prostate Cancer in Cases per 100,000 Males by Race/Ethnicity in Montgomery County, 2009–2013.

(Sources: Healthy Montgomery. 2013)

Mortality

Death rates due to prostate cancer have decreased in Maryland overall and in Montgomery County. 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 (Figure 34).

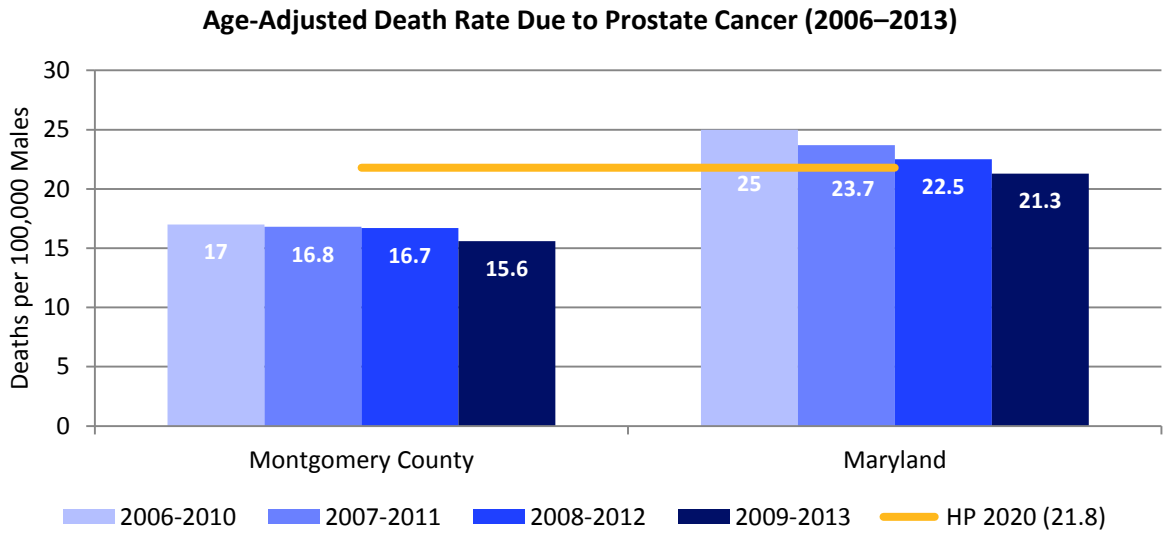


Figure 34. Age-Adjusted Death Rate due to Prostate Cancer per 100,000 Males in Montgomery County and Maryland, 2006–2013. (Sources: Healthy Montgomery. 2013)

In Montgomery County, Blacks have higher death rates associated with Prostate Cancer in comparison to whites. Blacks have rates that surpass the overall death rates for the county (Figure 35).

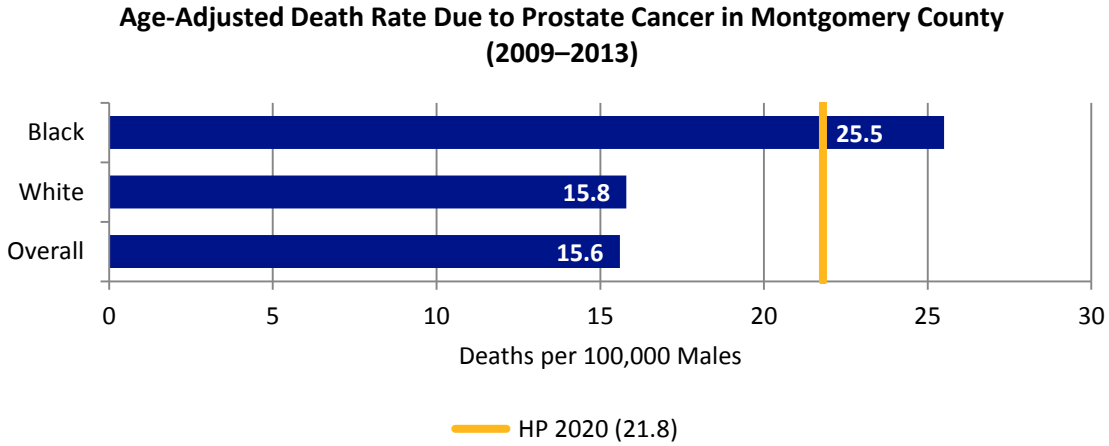


Figure 35. Age-Adjusted Death Rate due to Prostate Cancer per 100,000 Males by Race/Ethnicity in Montgomery County, 2009–2013.
(Sources: Healthy Montgomery. 2013)

1.5 Cervical Cancer

Incidence

The incidence rates for cervical cancer amongst females in Maryland overall have decreased and has met the HP 2020 target. In Montgomery County, the incidence rates are substantially lower than those the state overall. Montgomery County has achieved the HP 2020 target since 2006 (Figure 36).

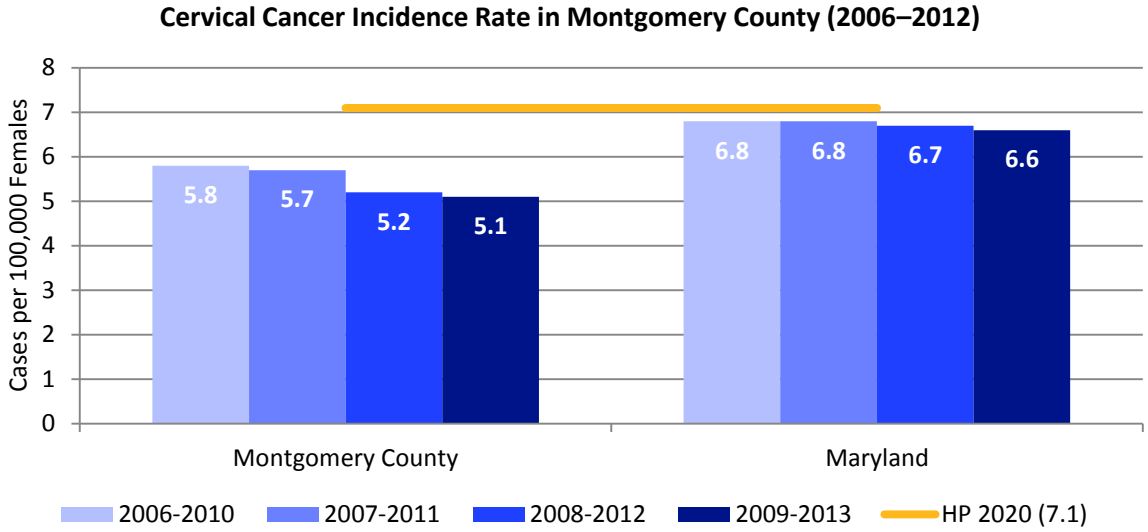


Figure 36. Age-Adjusted Incidence Rate for Cervical Cancer in Cases per 100,000 Females in Montgomery County and Maryland, 2006–2013.

(Sources: Healthy Montgomery. 2013)

When looking at cervical cancer incidence rates based on racial/ethnical groups, Hispanics in Montgomery County have the highest incidence rates, surpassing the HP 2020 target and the overall rate for the county. The HP 2020 target was met overall, with Blacks and whites having rates lower than Hispanics (Figure 37).

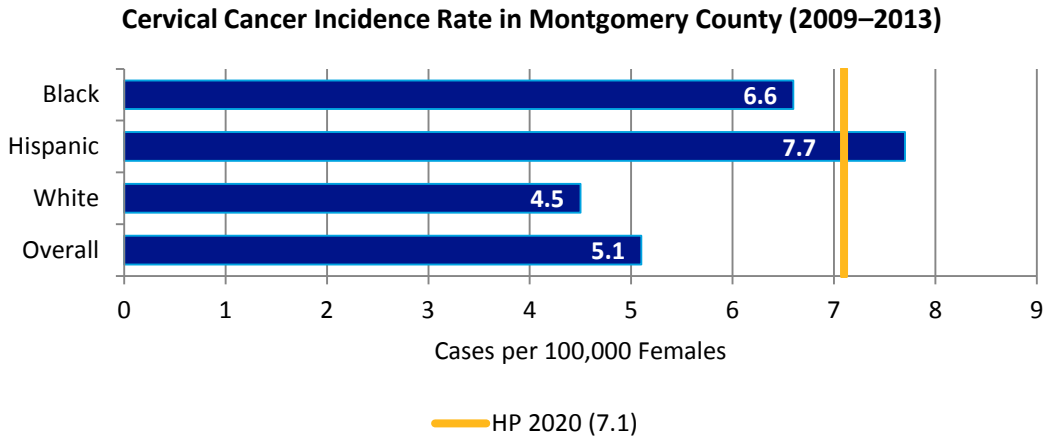


Figure 37. Age-Adjusted Incidence Rate for Cervical Cancer in Cases per 100,000 Females by Race/Ethnicity in Montgomery County, 2009–2013.

(Sources: Healthy Montgomery. 2013)

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 and Montgomery County percentages are roughly the same, Montgomery County had a slightly greater percentage (Figure 38).

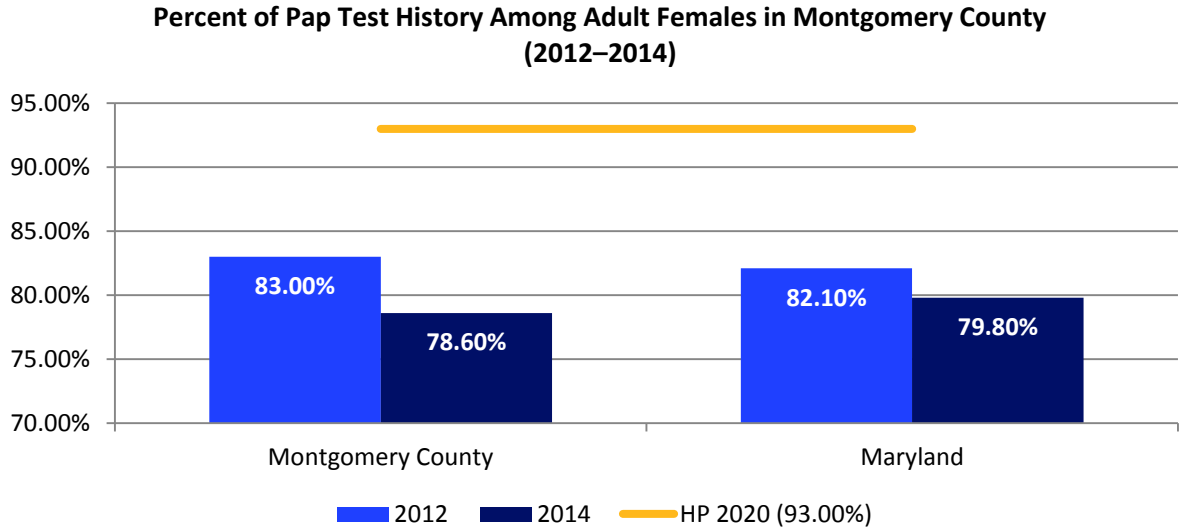


Figure 38. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years in Montgomery County and Maryland, 2012–2014.
(Sources: Healthy Montgomery, & MD BRFSS 2014)

For Montgomery 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 39).

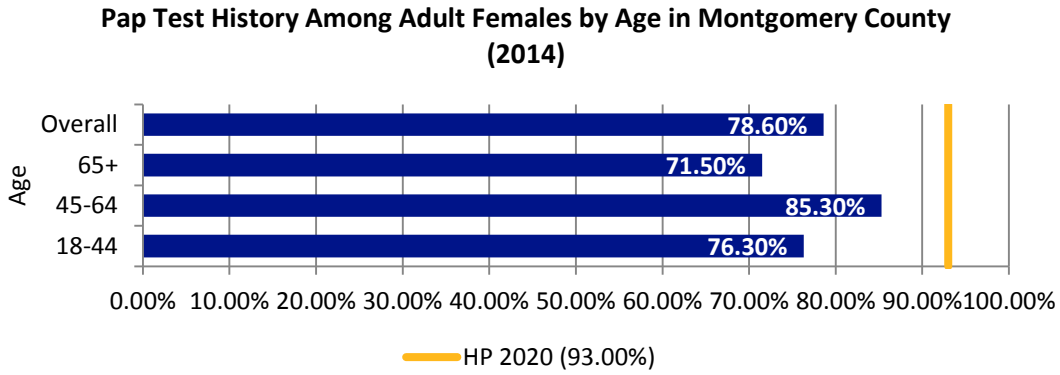


Figure 39. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years by Age in Montgomery County, 2014.
(Sources: Healthy Montgomery. 2014)

When looking at females aged 18 and over that had a pap smear in the past 3 years, through the categories of Race/Ethnicity, Montgomery County did not have any groups meet the HP 2020 target. The group contributing the highest percentage of females tested was white, followed closely by Hispanic, Black, Asian and then Other (Figure 40).

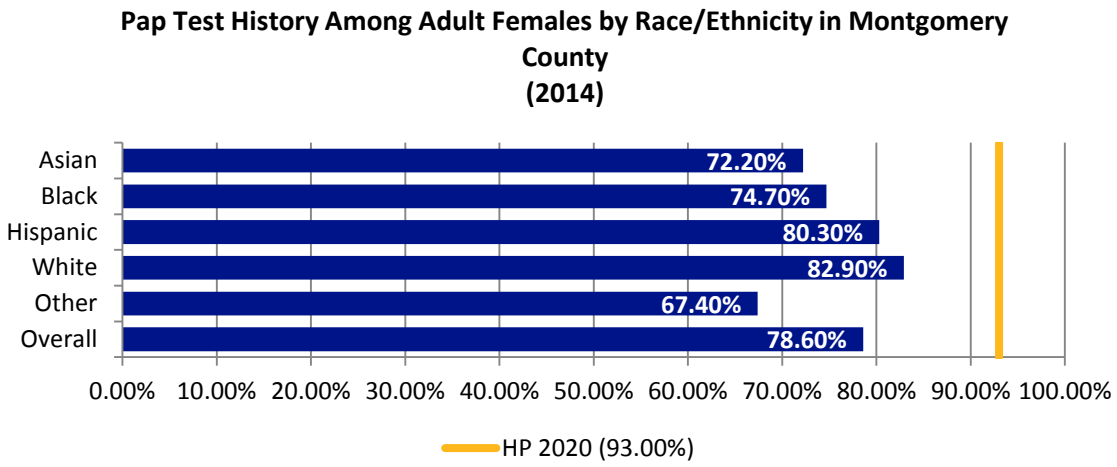


Figure 40. Percentage of Females aged 18 and over that have had a Pap Smear in the past 3 Years by Race/Ethnicity in Montgomery County, 2014.

(Sources: Healthy Montgomery. 2014)

1.6 Skin Cancer

Incidence

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

When Montgomery County incidence rates are stratified by demographic characteristics, racial, gender and age disparities become evident. Skin cancer incidence rates are higher among men (25.2 per 100,000) than women (13.6 per 100,000). White residents (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). 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).

Mortality

The death rates associated with skin cancer have remained stable when looking at Maryland as a whole, Montgomery 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)

In Montgomery 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. The HP 2020 targets were met for women within the county.

For Montgomery 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 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). However, the oral cancer incidence among women is rising while it has remained stable among men. In terms of age, the incidence of oral cancer is much higher in those aged 65+ (31.3 per 100,000) compared to those aged 64 and younger (4.9 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).

Mortality

In Maryland overall, the mortality rates of oral cancer have been decreasing[5]. With that being said, the state of Maryland has 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. Maryland's overall oral cancer mortality rate is 2.4 per 100,000.

In Montgomery County, men (2.1 per 100,000) have a higher mortality rate than women (0.8 per 100,000); however, both rates have met the HP 2020 target. Mortality rates for oral cancer are higher in those aged 65+ (7.7 per 100,000) compared to those 64 years and younger (0.5 per 100,000). The HP 2020 target was met only in those aged 64 and younger.

[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 and in Montgomery County respectively[6]. However, the incidence rate in Montgomery County (19.3 per 100,000) is higher than in the state (15 per 100,000). In Montgomery County, females (27.9 per 100,000) have a greater incidence rate of thyroid cancer than do males (9.8 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+ (28.2 per 100,000) have a higher incidence of thyroid cancer than their younger counterparts (18 per 100,000). The race/ethnicity with the highest incidence rate of thyroid cancer is whites (20.6 per 100,000), followed by Asians (17.6 per 100,000), Hispanic (16.2 per 100,000), and then Black (12.3 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.

[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[8] (Figure 41). This decrease has helped the County meet the SHIP 2017 target of 15.2 percent adolescent tobacco smokers.

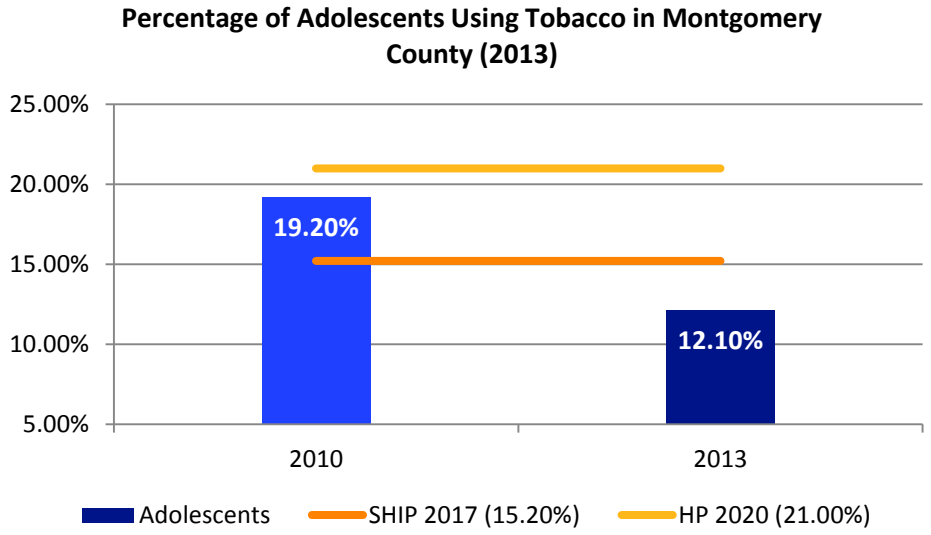


Figure 41. Adolescents Using Tobacco in Montgomery County, 2013

(Sources: Healthy Montgomery. 2013)

Adult smokers comprise 7.9 percent of Montgomery County residents (Figure 42). Overall, the county meets 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 do not meet the HP 2020 target; however, they do meet the SHIP target.

[8] Healthy Montgomery (2013). *Adolescents who use tobacco.*

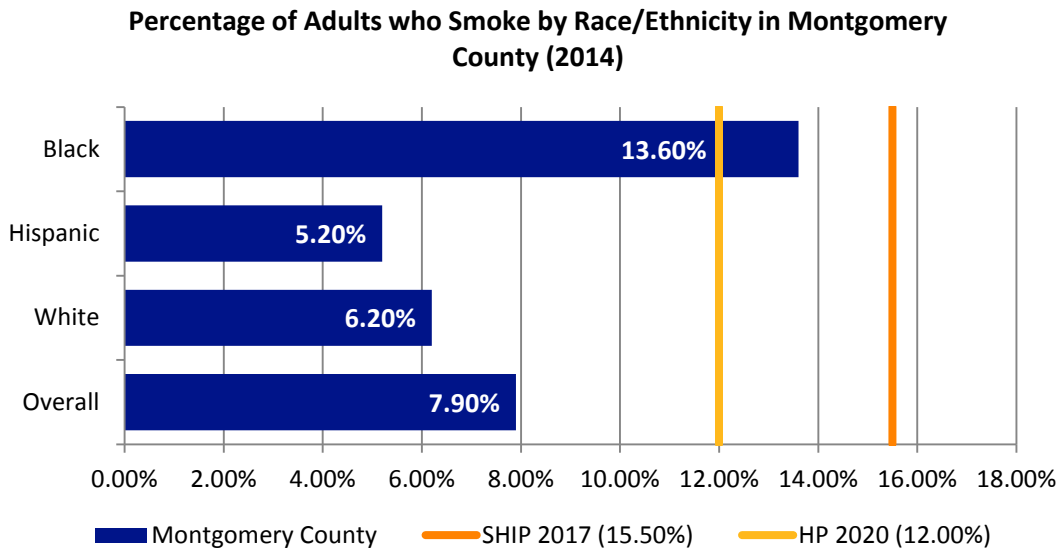


Figure 42. Adults who Smoke by Race/Ethnicity in Montgomery County, 2014
(Sources: Healthy Montgomery. 2014)

Most of the adult smokers in Montgomery County fall into the 45–64 years age group (Figure 43). The data also shows that males are more likely to smoke than females in Montgomery County (Figure 44).

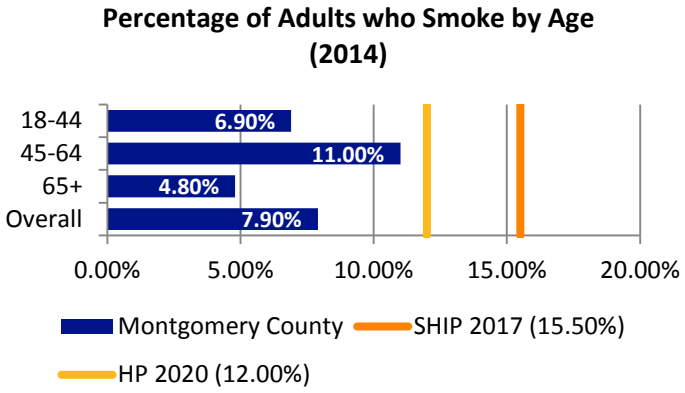


Figure 43. Adults who Smoke by Age in Montgomery County, 2014
(Sources: Healthy Montgomery. 2014)

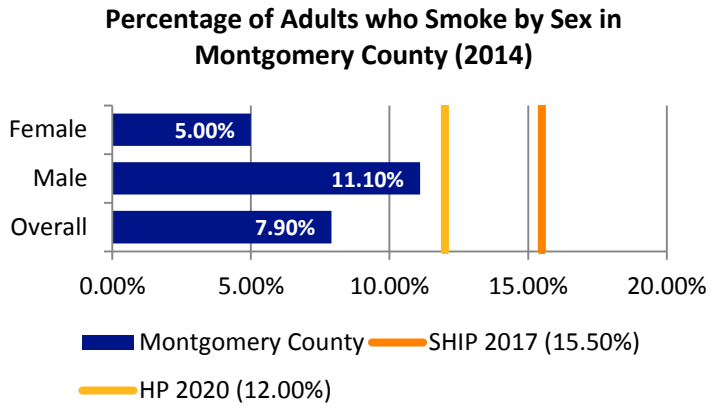


Figure 44. Adults who Smoke by Sex in Montgomery County, 2014
(Sources: Healthy Montgomery. 2014)

A survey of Montgomery County residents over the age of 12 found that 5.4 percent of the population reported having smoked marijuana (Figure 45). The highest rate of marijuana use was among the 12–17 year old adolescents.

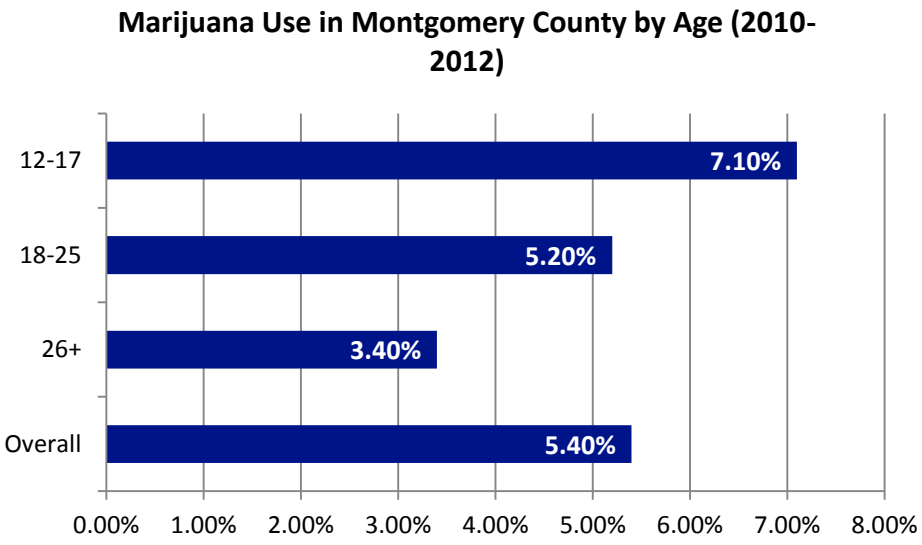


Figure 45: Marijuana Use in Montgomery County by Age (2010-2012)
(Sources: Healthy Montgomery. 2012)

Community Resources

Cancer resources and services in Shady Grove Medical Center'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:

- Shady Grove Medical Center (SGMC) has a comprehensive oncology program including breast surgeons and oncologists that provide specialized care for breast cancer:
    - A full team of Cancer Navigators at SGMC is available to assist patients and families
    - Support groups are offered including special groups for Breast, Thyroid, Leukemia & Lymphoma, and Caregivers
    - A Cancer Outreach Coordinator for SGMC provides guidance to low-income patients and helps to coordinate cancer screening and outreach services in the community
- SGMC has a close working relationship with the following safety net clinics: Mobile Medical Care, Inc., Mercy Health Clinic, Pan Asian Vietnamese Health Clinic, Mansfield Kaseman Clinic, and Montgomery County Women's Cancer Control Program.
- SGMC offers various cancer support groups and classes including a breast cancer support group, a fitness class for cancer patients and survivors and a support group for cancer caregivers (Hope Connections).
- The Shady Grove Adventist Aquilino Cancer Center, located adjacent to SGMC, offers a wide range of top quality outpatient cancer services.
- 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 cancer.
- 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.
- 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

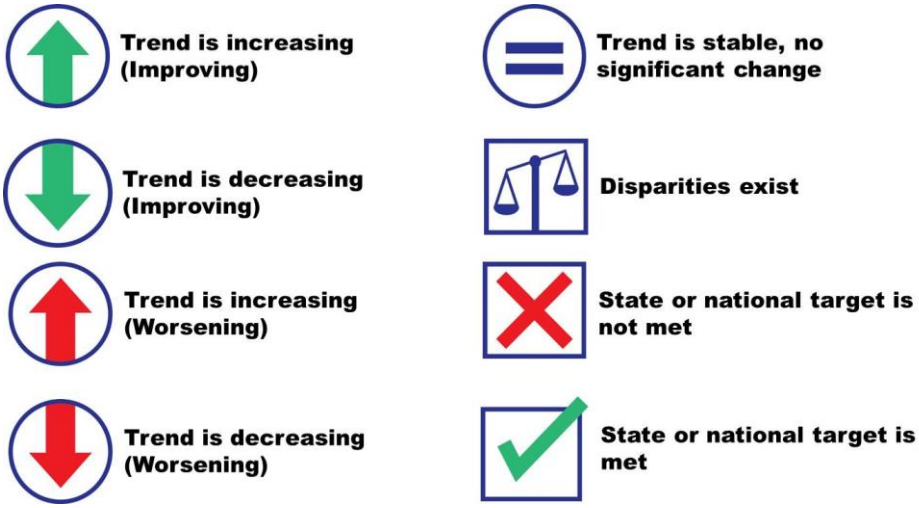
2.1 Heart disease

2.2 Stroke

Cardiovascular Health

KEY FINDINGS

- There is a downward trend in mortality rates for heart disease and stroke in Montgomery County and Maryland overall.
- Montgomery County meets both the Healthy People 2020 and SHIP 2017 targets for the rate of deaths related to heart disease.
- Blacks, followed by whites, have the highest mortality rates due to heart disease in Montgomery County. Hispanics and Asians have the lowest mortality rates in the county.
- The American Indian/Alaskan Native and Black residents of Montgomery County have the highest rates of hospitalization due to heart disease.
- Montgomery County meets the Healthy People 2020 target for rates of stroke-related deaths.
- Montgomery County does not 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.
- In Montgomery County, cholesterol rates are highest among males, as well as whites 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.

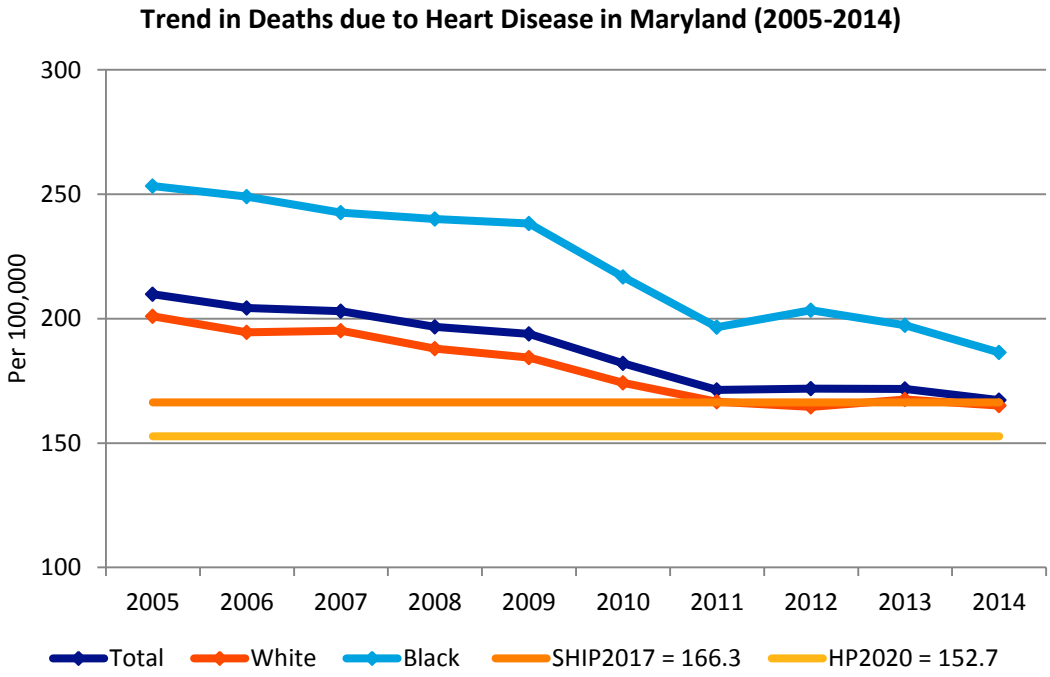


Figure 1. Trends in Death Rate due to Heart Disease, 2014
(Sources: Maryland Vital Statistics Report, 2014; Maryland State Health Improvement Process (SHIP))

Similar to the state, Montgomery County has 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, Montgomery County has 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

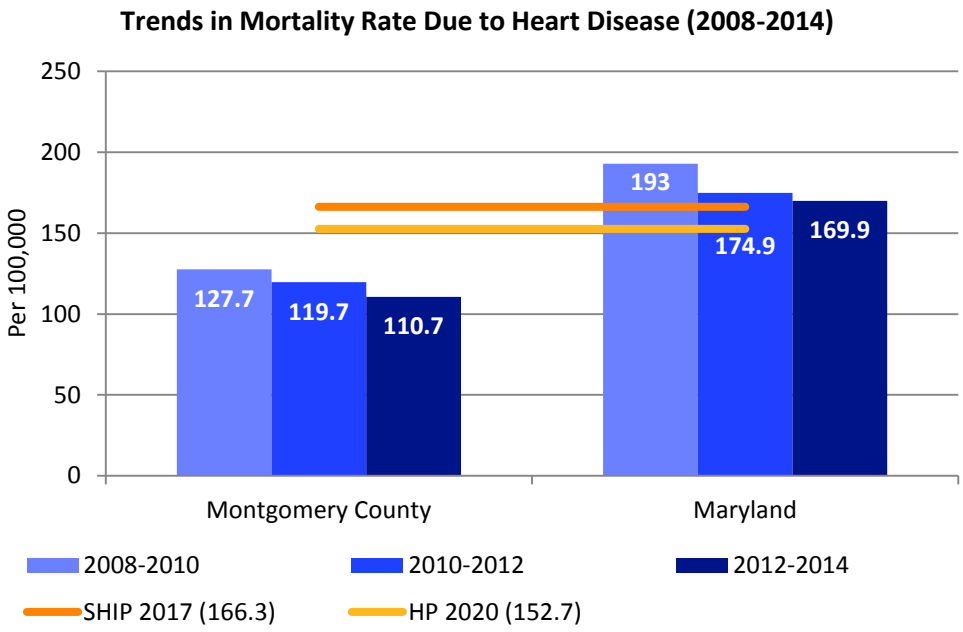


Figure 2. Death Rate due to Heart Disease per 100,000 Population
(Source: SHIP, 2008-2014)

Montgomery County has consistently had a lower mortality rate due to heart disease than 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 152.7 deaths per 100,000 (Figure 3). The state of Maryland did not meet the targets.

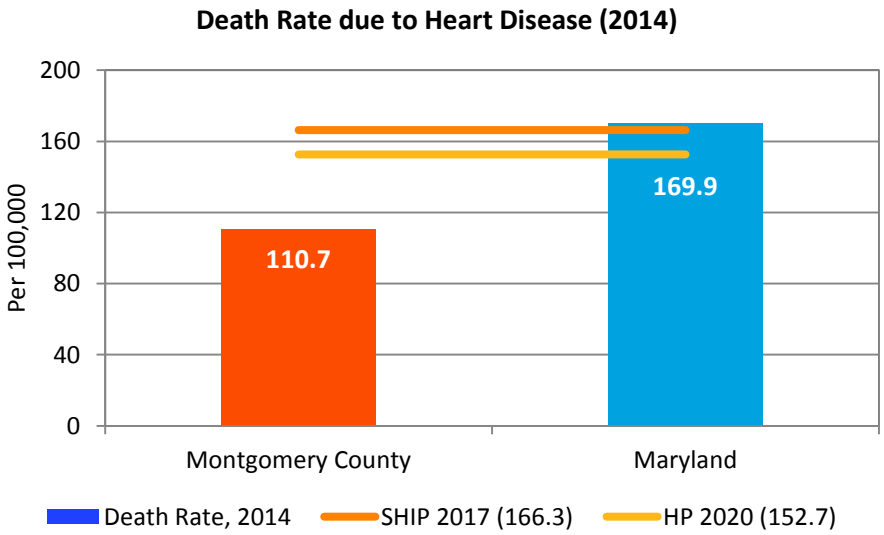


Figure 3. Death Rate due to Heart Disease, 2014
(Source: Maryland Vital Statistics Report, 2014)

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 and Maryland. Hispanics, on the other hand, have the lowest mortality rate in the county and state. Maryland has higher mortality rates than Montgomery County for residents of all race and ethnicity (Figure 4).

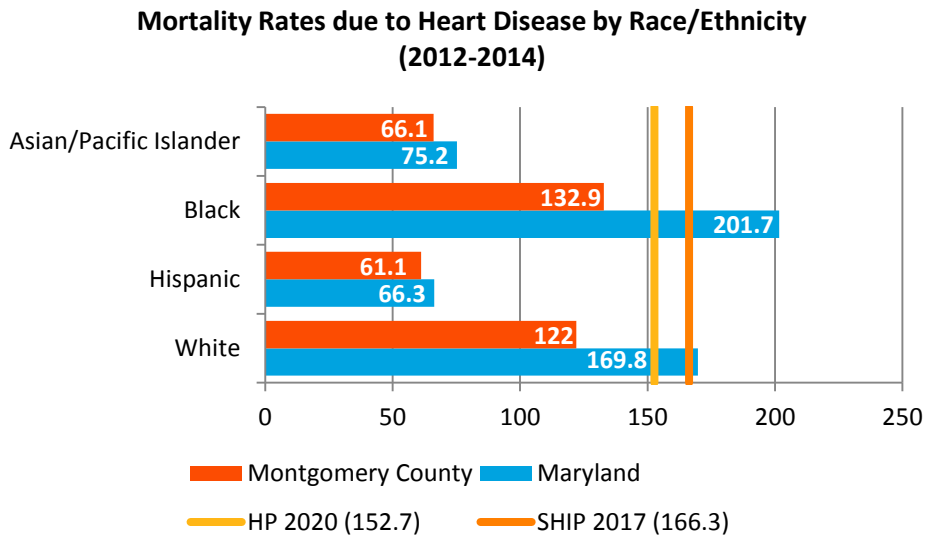


Figure 4. Heart Disease Related Deaths across Racial and Ethnic Groups
(Source: SHIP, 2012-2014)

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 Montgomery County (Figures 5).

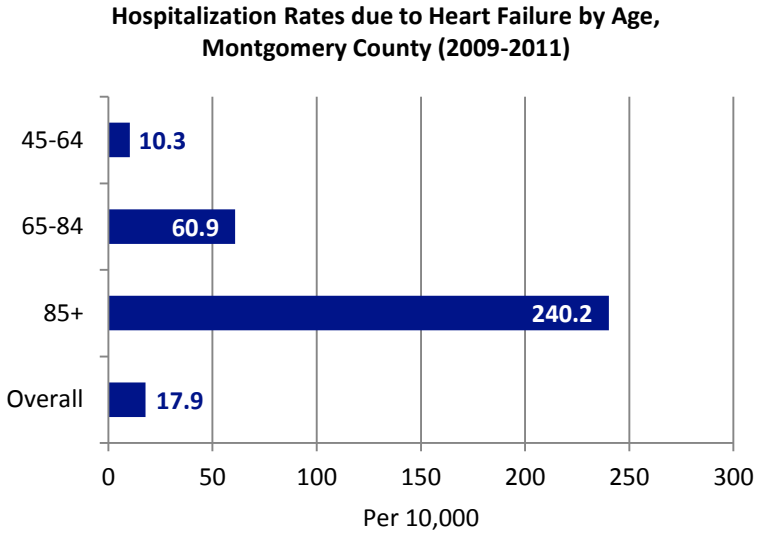


Figure 5. Hospitalization Rates due to Heart Failure by Age in Montgomery County
(Source: Healthy Montgomery, 2009-2011)

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 6). Blacks are the second most hospitalized population in Montgomery County at 40.2 per 10,000. Asians are the have the lowest hospitalization rate due to heart failure.

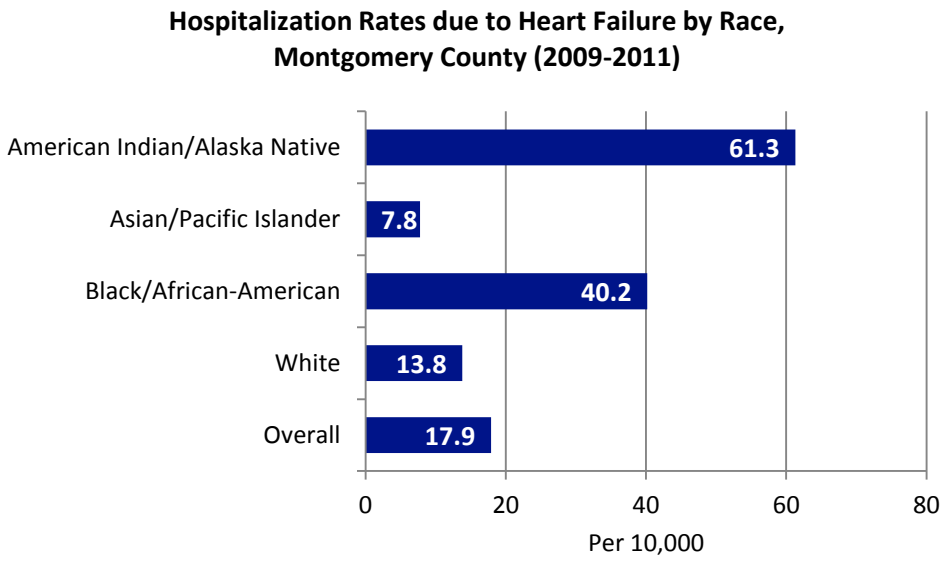


Figure 6. Hospitalization Rates due to Heart Failure by Race in Montgomery County (Source: Healthy Montgomery, 2009-2011)

2.2 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 7). 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.

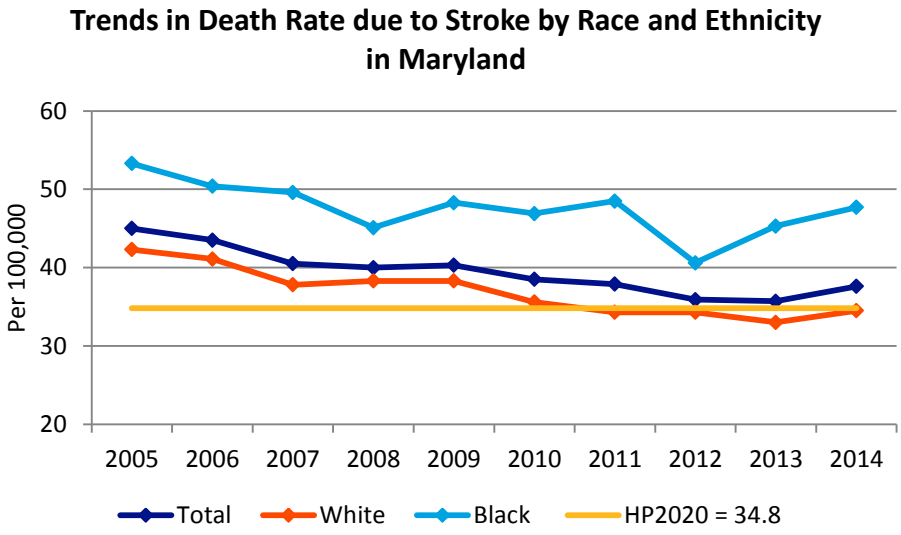


Figure 7. Trends in Death Rate due to Stroke by Race and Ethnicity in Maryland, 2005-2014
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

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 8). In addition to meeting the national target, the death rate due to stroke has significantly improved over the years.[6]

[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

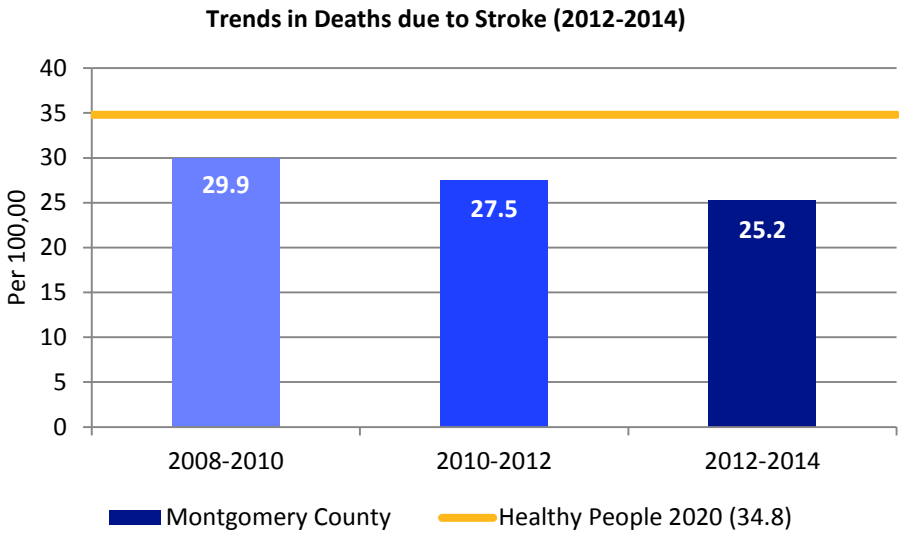


Figure 8 . Trends in Deaths due to Stroke in Montgomery County.
(Sources: Healthy Montgomery, 2012-2014)

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 (Figure 9). Blacks and whites are disproportionately burdened with high blood pressure in Montgomery County.

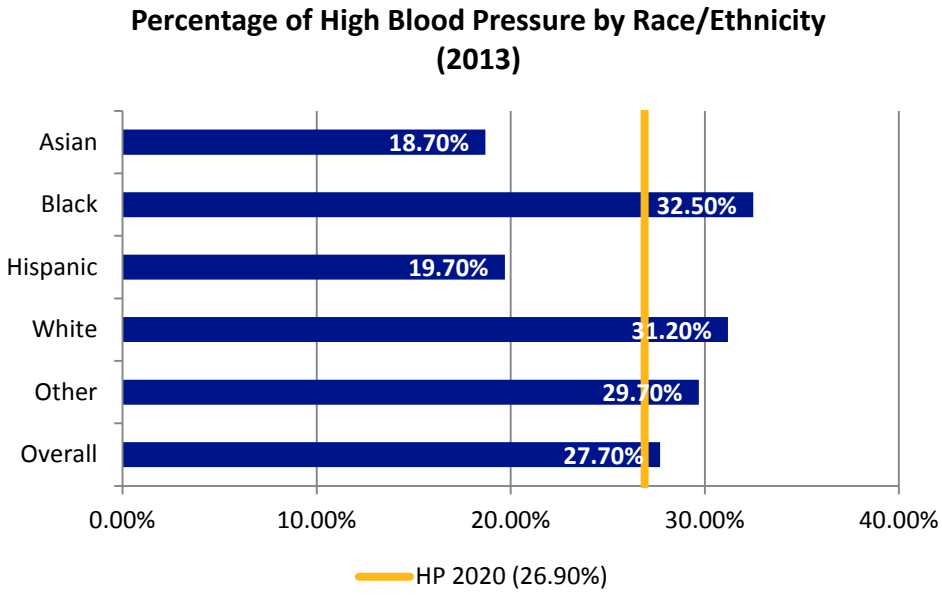


Figure 9. Prevalence of High Blood Pressure by Race and Ethnicity in Montgomery County
(Sources: Healthy Montgomery, 2013)

[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

In terms of gender, males are disproportionately affected by high blood pressure than females (Figure 10). When broken down into age groups, seniors 65 and over have the highest prevalence of hypertension, followed by the 45-64 age group (Figure 11).

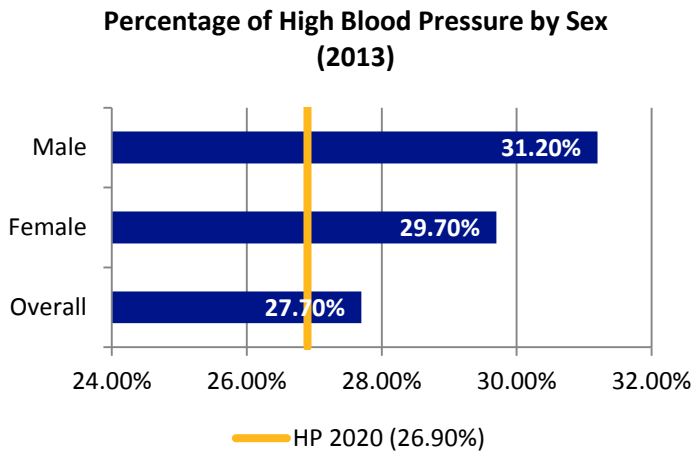


Figure 10. Prevalence of High Blood Pressure by Sex in Montgomery County
(Sources: Healthy Montgomery, 2013)

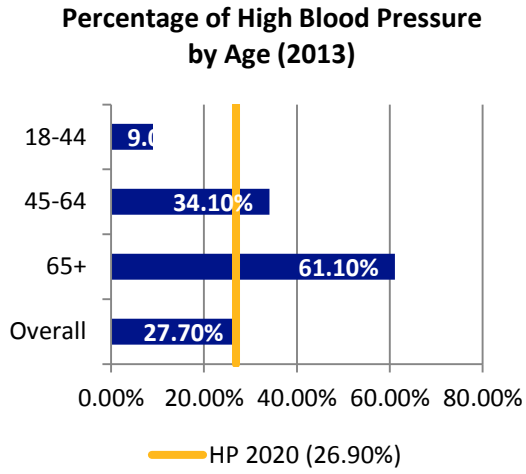


Figure 11. Prevalence of High Blood Pressure by Age in Montgomery County
(Sources: Healthy Montgomery, 2013)

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 12).

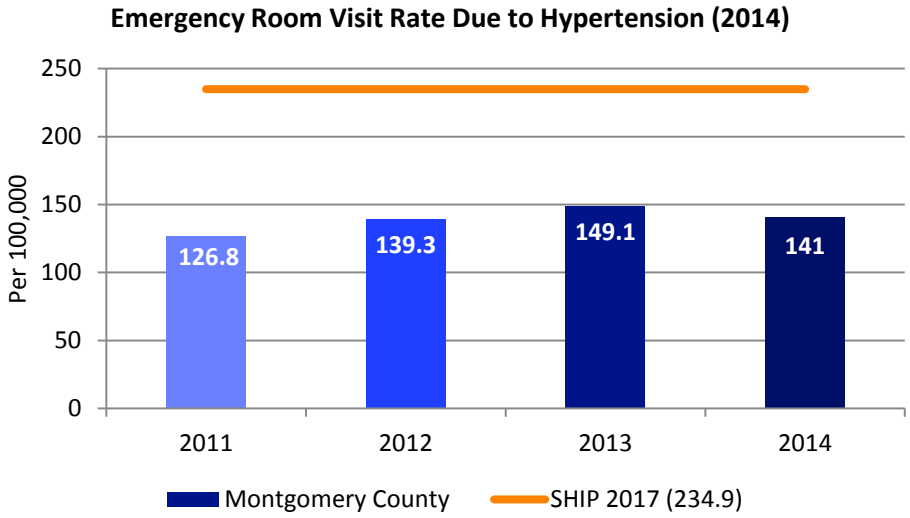


Figure 12. Trend in Emergency Room Visit Rate due to Hypertension in Montgomery County
(Sources: Healthy Montgomery, 2014)

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. Montgomery County has not met the target (Figure 13). Although the figure below shows an increase in the prevalence of high cholesterol, it has not been a significant increase.

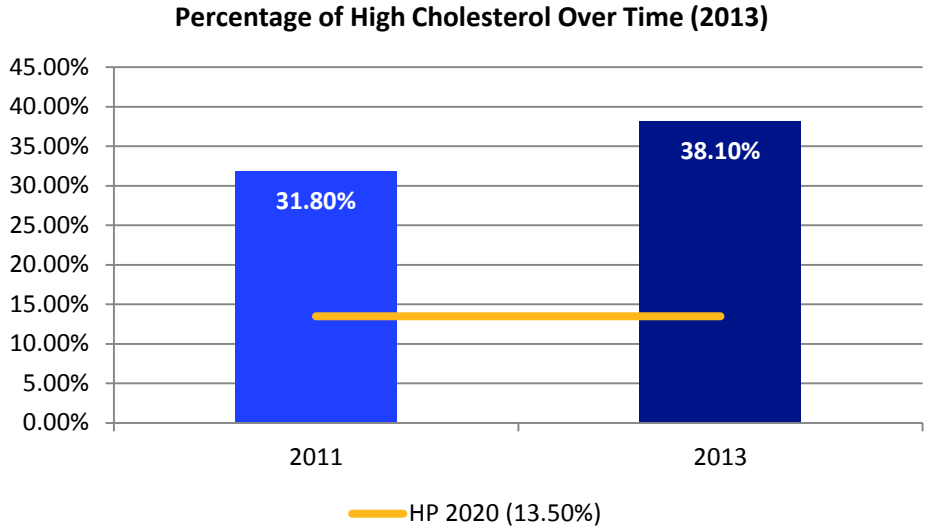


Figure 13. Prevalence of High Cholesterol in Montgomery County
(Sources: Healthy Montgomery, 2013)

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 (Figure 14). In Montgomery County, males are more affected by high cholesterol than females (Figure 15). 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 the county (Figure 16).

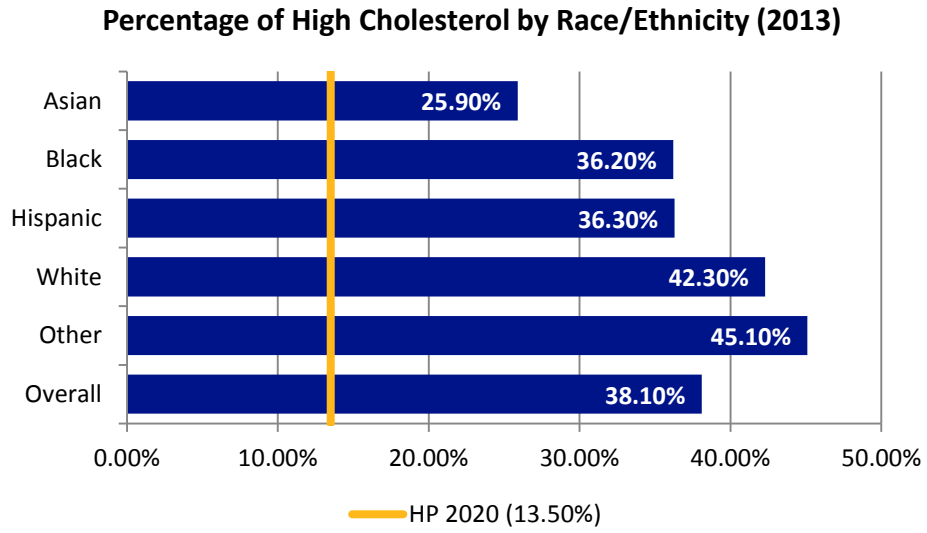


Figure 14. Prevalence of High Cholesterol in Montgomery County
by Race and Ethnicity
(Sources: Healthy Montgomery , 2013)

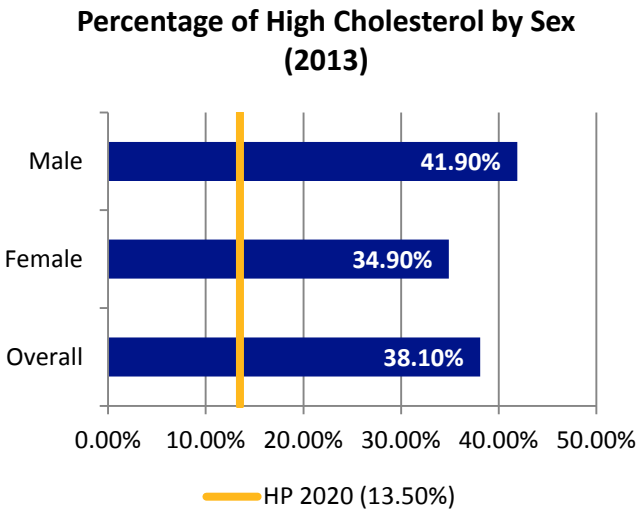


Figure 15. Prevalence of High Cholesterol by Gender in Montgomery County
(Sources: Healthy Montgomery, 2013)

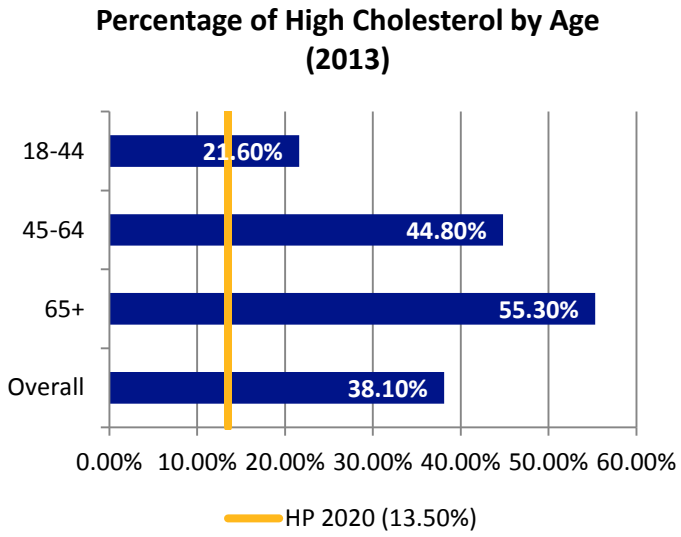


Figure 16. Prevalence of High Cholesterol by Age in Montgomery County
(Sources: Healthy Montgomery, 2013)

Community Resources

Cardiology services are provided by all hospital providers in Montgomery County. There are also numerous physician providers as well as the safety net clinics that provide diagnosis and treatment for heart disease and stroke. The following are specific services for individuals with heart disease and stroke:

- Montgomery County Health Department has an African American Health Program that addresses heart health.
- Lifestyle change programs, such as the Complete Health Improvement Program (CHIP), and Plus 15.
- Shady Grove Medical Center has Cardiac Outreach Services that provide screening, education, and support.
- Support groups, such as “Heart to Heart”, are offered throughout Montgomery County.
- The American Heart Association provides support, education, research and advocacy.
- The Montgomery County Stroke Association provides resources and support as well as promoting stroke awareness. This group has chapters throughout Montgomery County. There are also Stroke Clubs and Support Groups, some of which meet in senior centers.
- Adventist HealthCare Rehabilitation provides both inpatient and outpatient rehabilitation treatment to stroke patients, which also includes education and support for patients and their families.

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.

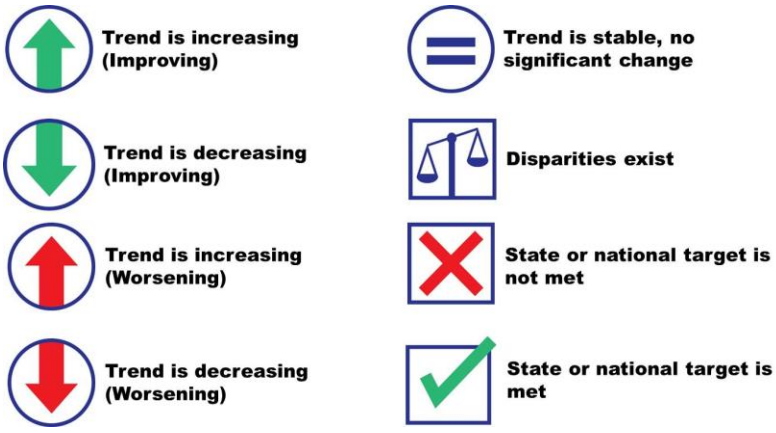
- In Montgomery County, the groups with the highest prevalence of diabetes included Asians (9.3 percent), males (7.7 percent), and those that were 65 years of age or older (19.2 percent).

- 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

- The SHIP 2017 target for ER visit rates due to diabetes (186.3 per 100,000) was met by Montgomery County (95 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 as of 2014 was 7 percent since 2011. The overall prevalence in Maryland was 10.2% in 2014 (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.

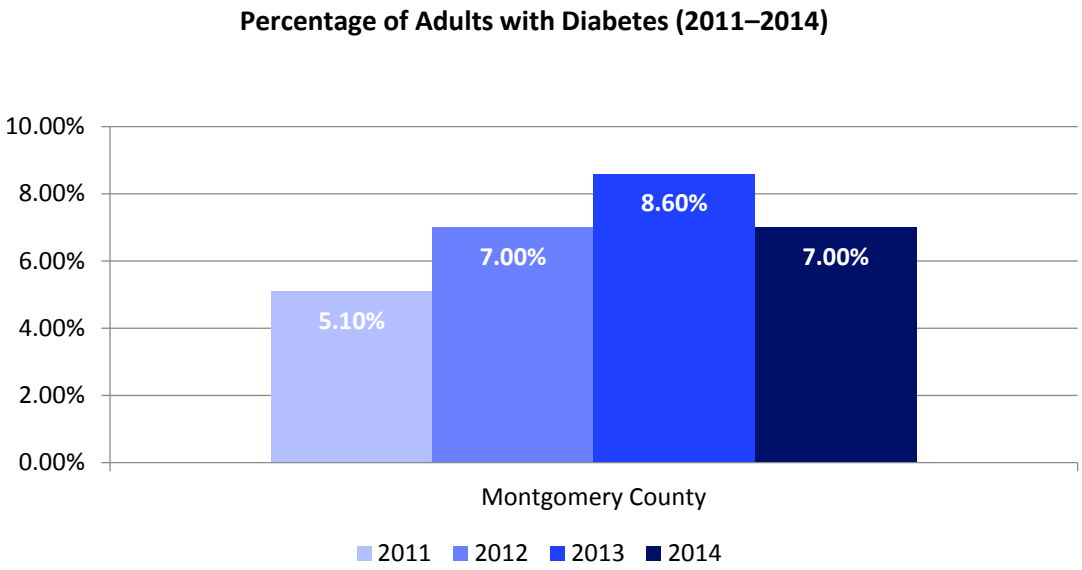


Figure 1. Percentage of Adults with Diabetes, 2011–2014. Excludes diabetes cases during pregnancy. Crude rates not comparable across county populations (Source: Maryland BRFSS Data, 2014)

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 (Figure 2). Males were more likely to be diagnosed with diabetes in Montgomery County at 7.7% (compared to 6.3% of females) (Figure 3). In terms of age, the older age group of 65 years or more was the most likely to have a diabetes in Montgomery County (Figure 4).

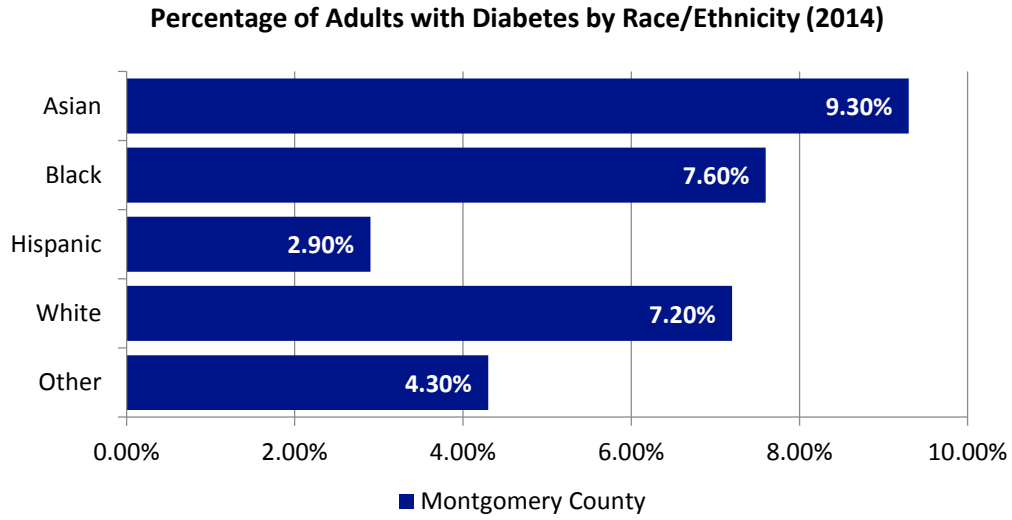


Figure 2. Percentage of Adults with Diabetes by Race/Ethnicity, 2014
Note: Excludes diabetes cases during pregnancy.
Crude rates not comparable across county populations
(Source: Maryland BRFSS Data)

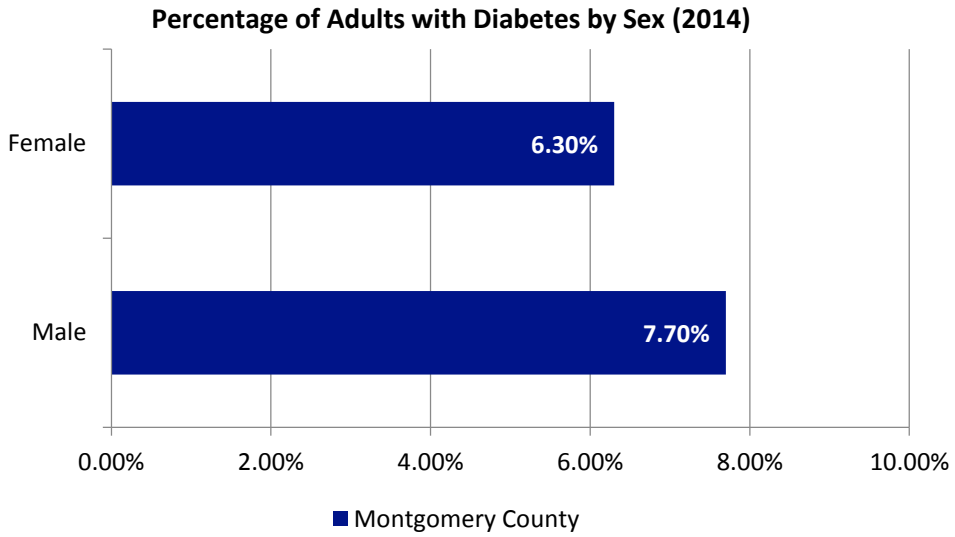


Figure 3. Percentage of Adults with Diabetes by Sex, 2014
Note: Excludes diabetes cases during pregnancy.
Crude rates not comparable across county populations
(Source*:* Maryland BRFSS Data, 2014)

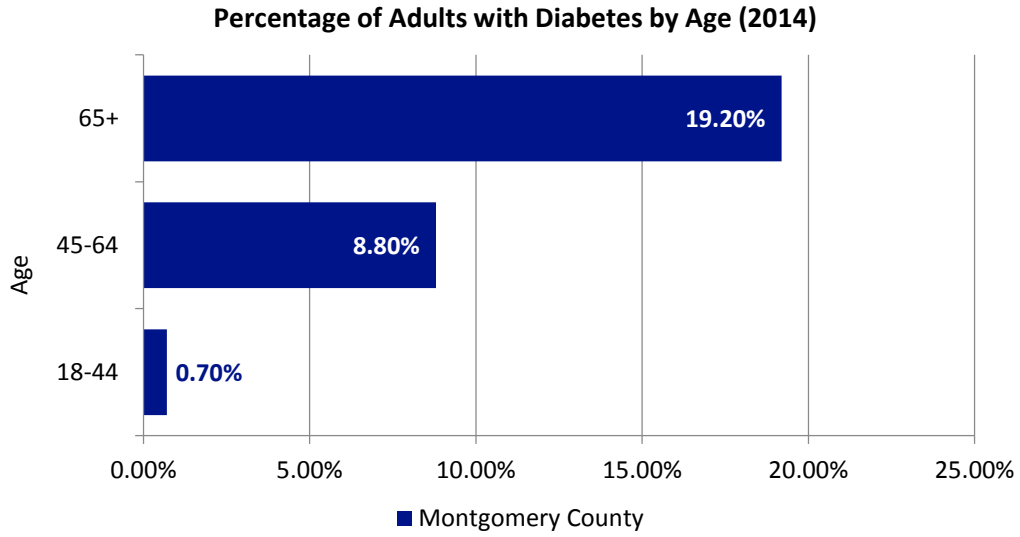


Figure 4. Percentage of Adults with Diabetes by Age, 2014
Note: Excludes diabetes cases during pregnancy.
Crude rates not comparable across county populations
(Source*:* Maryland BRFSS Data, 2014)

The percentage of the Medicare population having received treatment for diabetes will also give a sense of the burden of disease on this potentially financially-strained group. There has been a slight gradual increase in proportion from 2009-2014 for Montgomery County. As of 2014, 24.7% of Montgomery County Medicare patients had been treated for diabetes (Figure5).

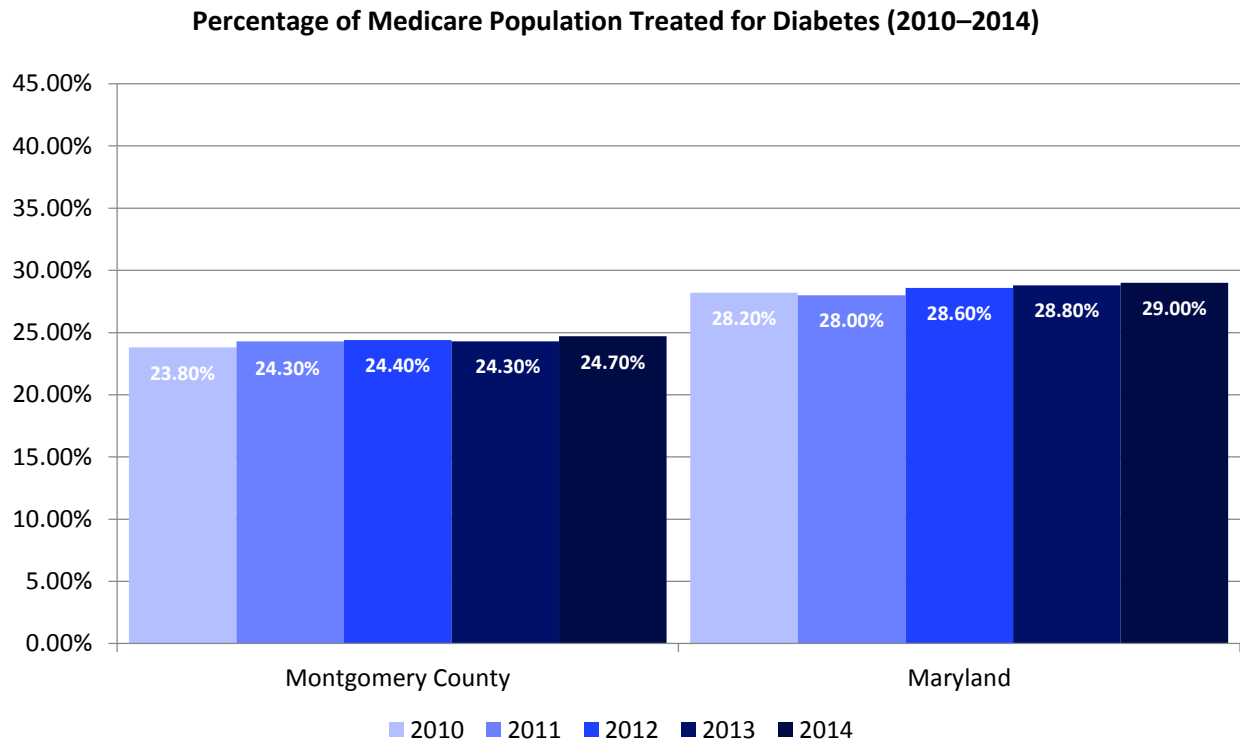


Figure 5. Percentage of Medicare Population Treated for Diabetes, 2010–2014
(Source: Centers for Medicare and Medicaid Services, 2014)

Mortality

While the aforementioned data give an overview of the percentage of the population affected by diabetes, health indicators such as mortality, hospitalization and emergency room 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. The rate has remained fairly consistent since 2007 with a slight decrease indicated in Maryland as a whole (Figure 6).

Between 2011 and 2014, Montgomery County 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, a rate below the Maryland SHIP target of 186.3 visits per 100,000 population (Figure 7).

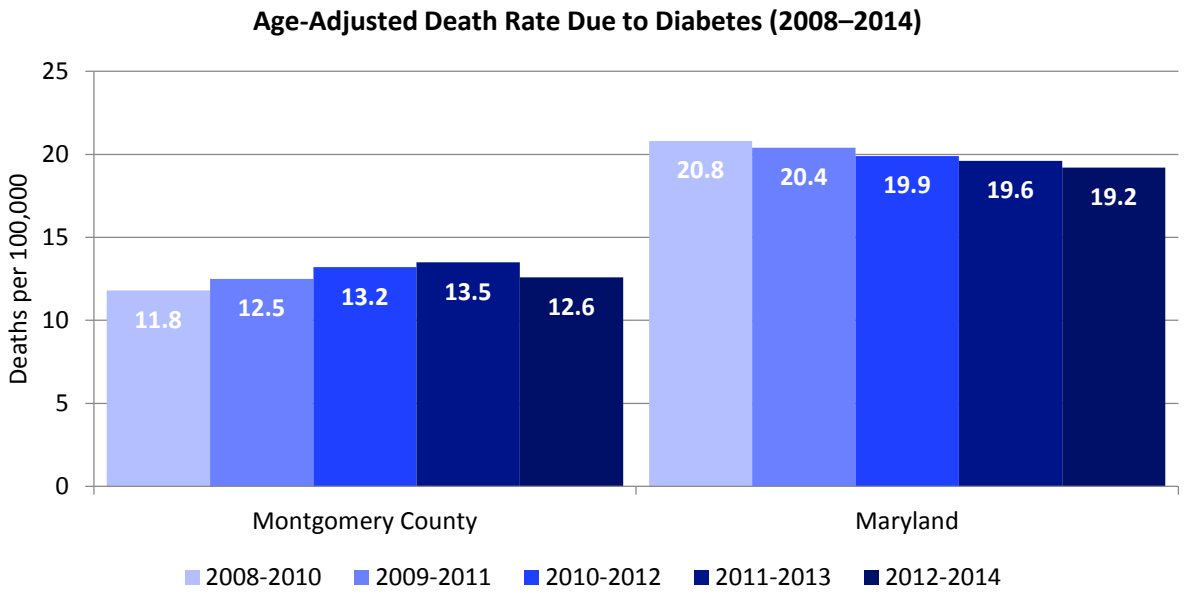


Figure 6. Age-Adjusted Death Rate Due to Diabetes per 100,000 Population, 2008-2014
(Source: Maryland Department of Health and Mental Hygiene (DHMH), 2014)

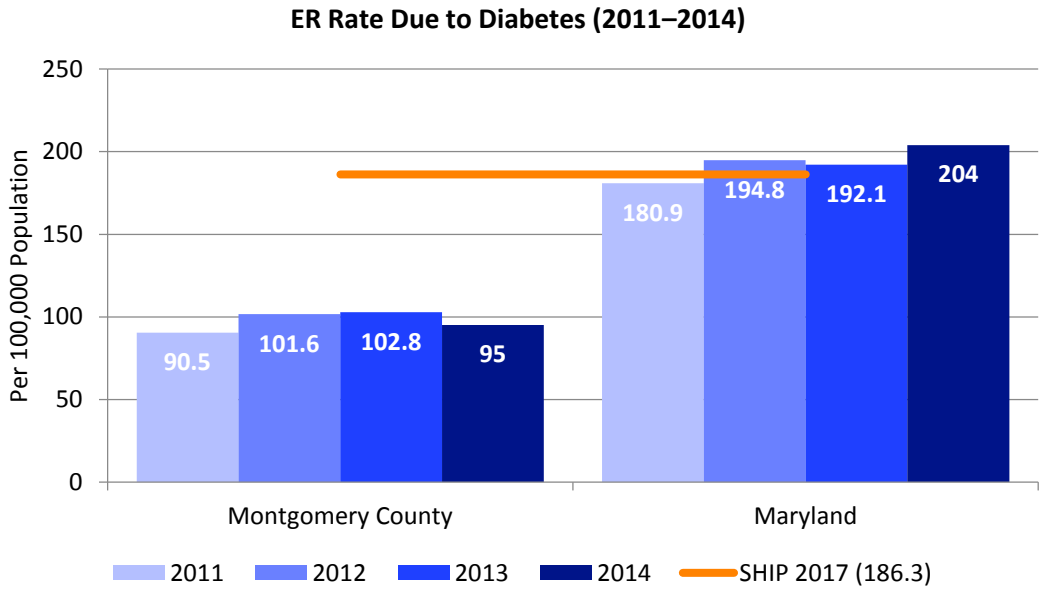


Figure 7. ER Rate Due to Diabetes per 100,000 Population, 2011–2014
(Source: DHMH, 2014)

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 and 2 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 for diabetes-related conditions was 11.6 per 10,000 (Table 2).

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)

Community Resources

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

- All the hospitals in Montgomery County, including Shady Grove Medical Center, provide diabetes education.
- Montgomery County Health Department provides free monthly diabetic education classes, including the "Diabetes Dining Club", which meets in various locations in the county.
- Diabetes support groups are offered throughout Montgomery County.
- The University of Maryland Extension Service, which involves the College of Agriculture and Natural Resources, provides diabetes education to both Latino/Hispanic and African American communities.
- The American Diabetes Association provides education and advocacy to the community and has a Diabetes Camp for Kids.
- A variety of physician offices and the safety net clinics diagnose, treat, and educate individuals with diabetes.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 4: Obesity

Obesity

KEY FINDINGS

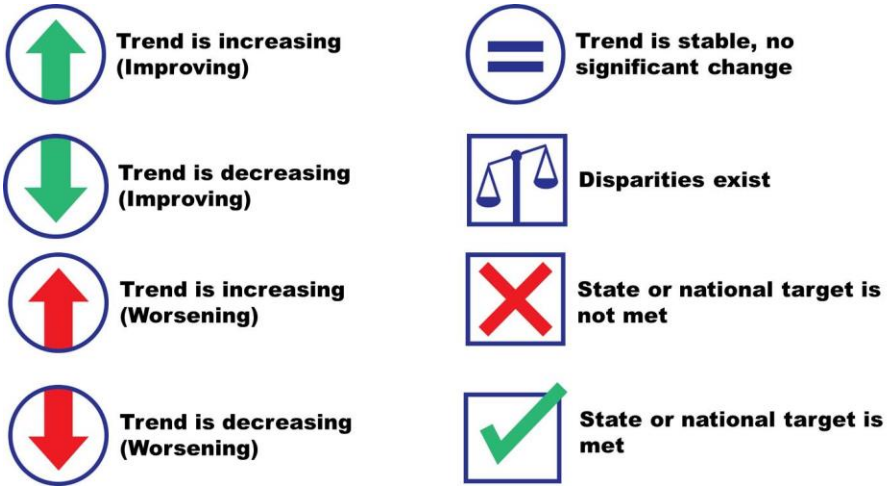
- Montgomery County has met the SHIP 2017 and Healthy People 2020 targets for overall percentage of adult residents who are overweight or obese.

- Hispanic and Black adult Montgomery County residents do not meet the targets and are disproportionately burdened. 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.

- The rate of Montgomery County residents experiencing food insecurity (that is, reduced access to quality, nutritious food items) is 7 percent, well below 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.



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 to 2014 (Figures 1 and 2).

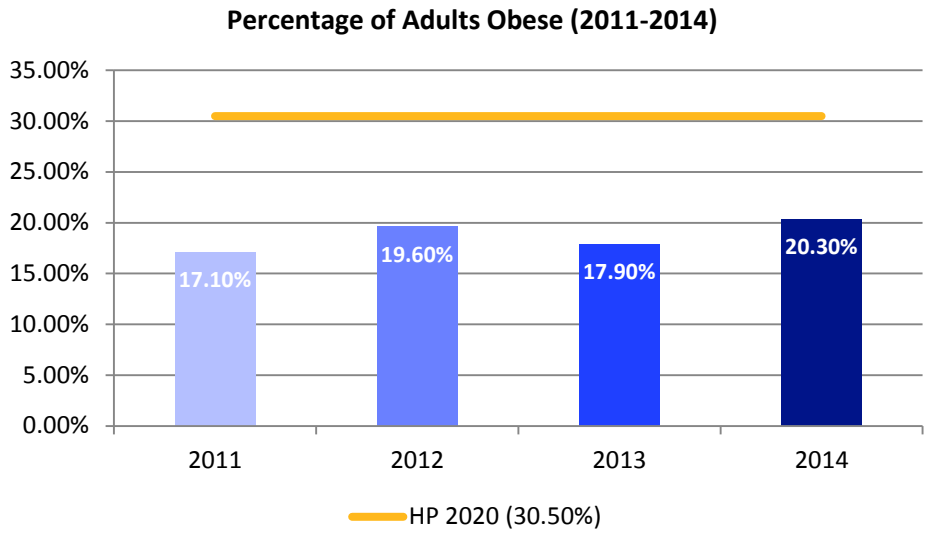


Figure 1. Percentage of Adults That Are Obese (BMI >= 30), 2011- 2014
(Source: Healthy Montgomery, 2014)

[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/

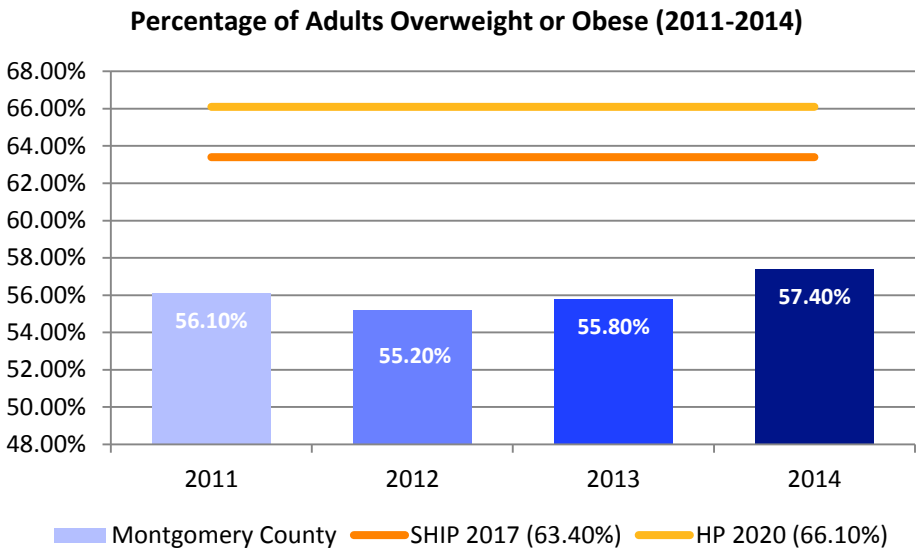


Figure 2. Percentage of Adults That Are Overweight or Obese (BMI >=25)
In 2011- 2014
(Source: Healthy Montgomery, 2014)

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 (Figure 3). By gender, more males (63.4 percent) are overweight or obese compared to the females (51.5 percent) in Montgomery County (Figure 4). The rate of overweight and obese females and males in Montgomery County meets both the SHIP 2017 and Healthy People 2020 targets.

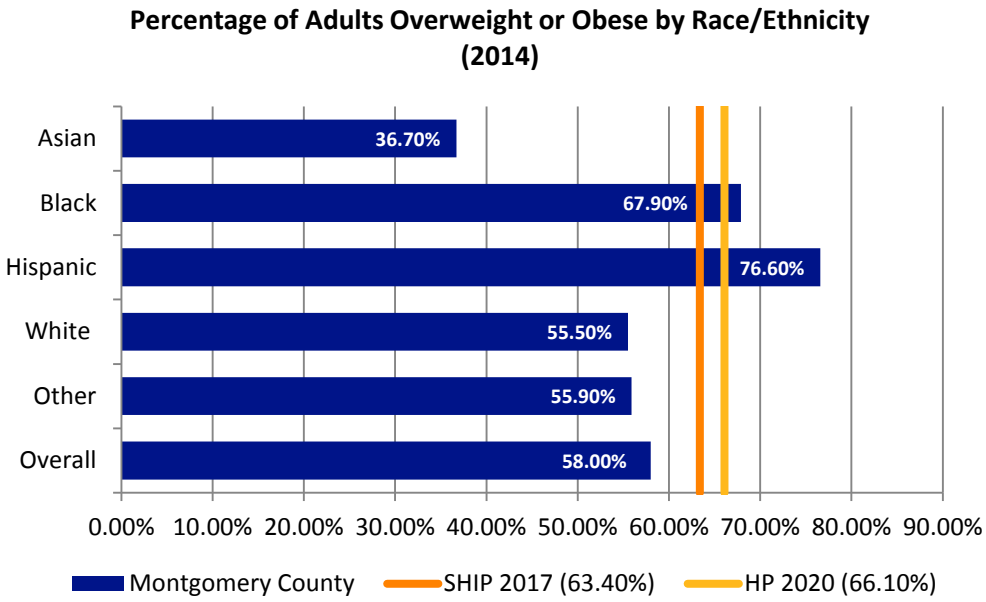


Figure 3. Percentage of Adults That Are Overweight or Obese
By Race/Ethnicity (BMI >=25), 2014
(Source: Healthy Montgomery, 2014)

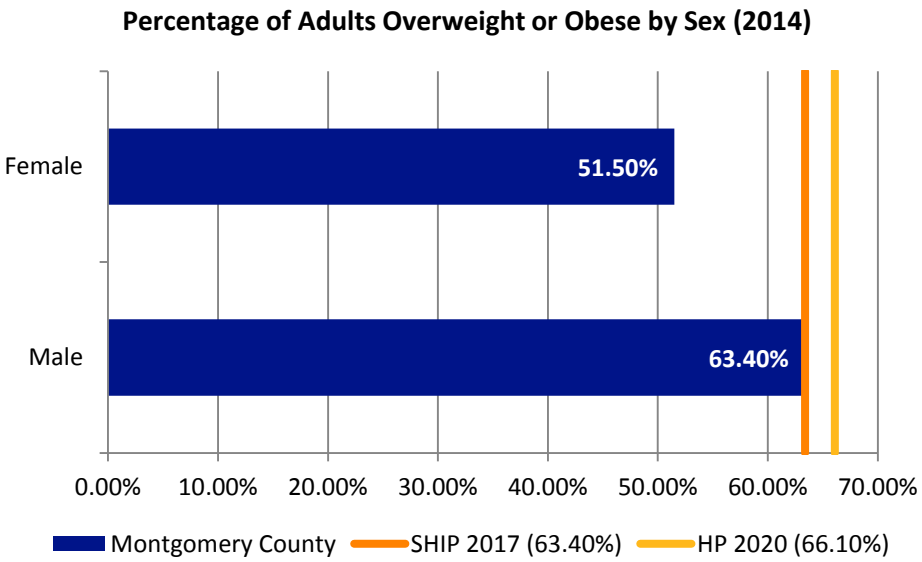


Figure 4. Percentage of Adults That Are Overweight or Obese
By Sex (BMI >=25), 2014
(Source: Healthy Montgomery, 2014)

By age, the proportion of overweight or obese individuals in Montgomery County goes up with each age bracket except for a slightly lower rate of obesity in the 65+ population compared to the 45-64 population. All age groups successfully meet the targets for percentage of the population overweight or obese set forth by HP2020 and SHIP2017 (Figure 5).

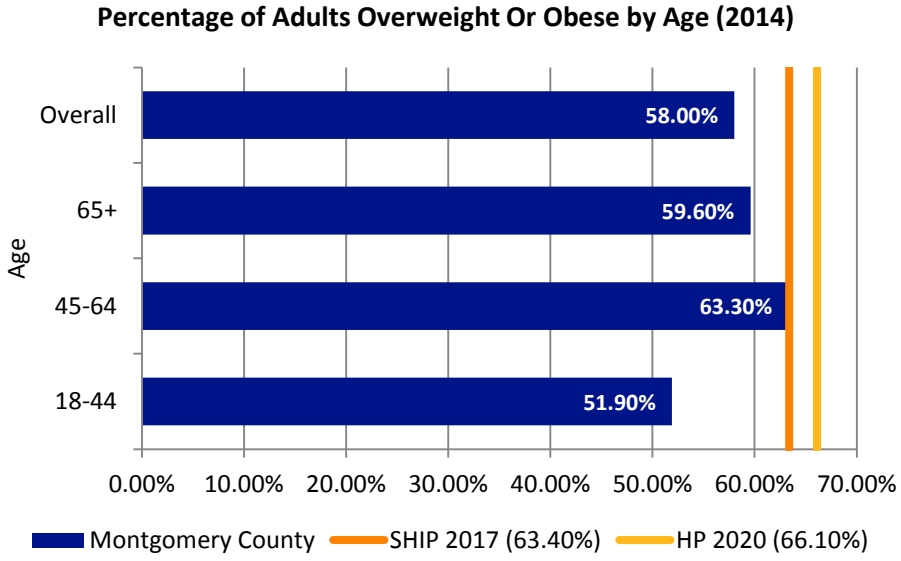


Figure 5. Percentage of Adults That Are Overweight or Obese
By Age (BMI >= 25), 2014
(Source: Healthy Montgomery, 2014)

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 (Figure 6).

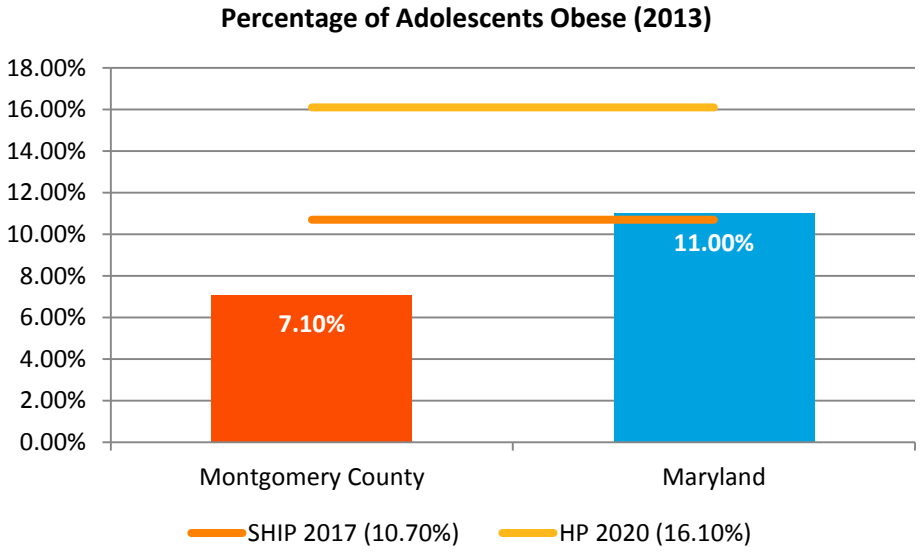


Figure 6. Adolescents that are obese (BMI >= 95th percentile) in 2013
(Source: Maryland Youth Risk Behavior Surveillance System (YRBSS), 2013)

[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] "Childhood Obesity Facts." CDC Healthy Schools, http://www.cdc.gov/healthyschools/obesity/facts.htm (Retrieved Feb 22, 2016)

[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 – 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

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, 8.9 percent of two to five year olds were obese compared to 17.5 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].

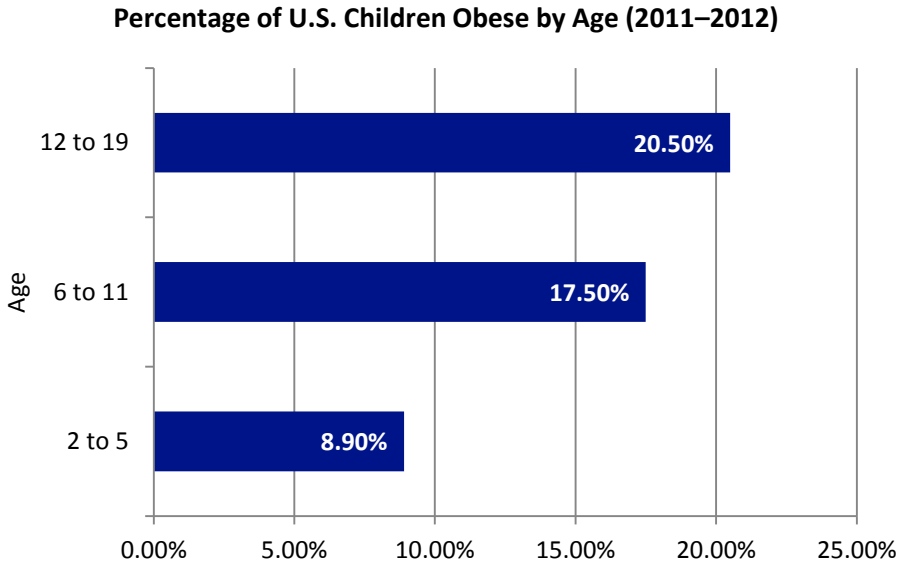


Figure 7. Percentage of US children that are obese (BMI >= 95th percentile) in 2011-2012 (Source: Centers for Disease Control and Prevention (CDC), 2012)

[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.[10]

Diet

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

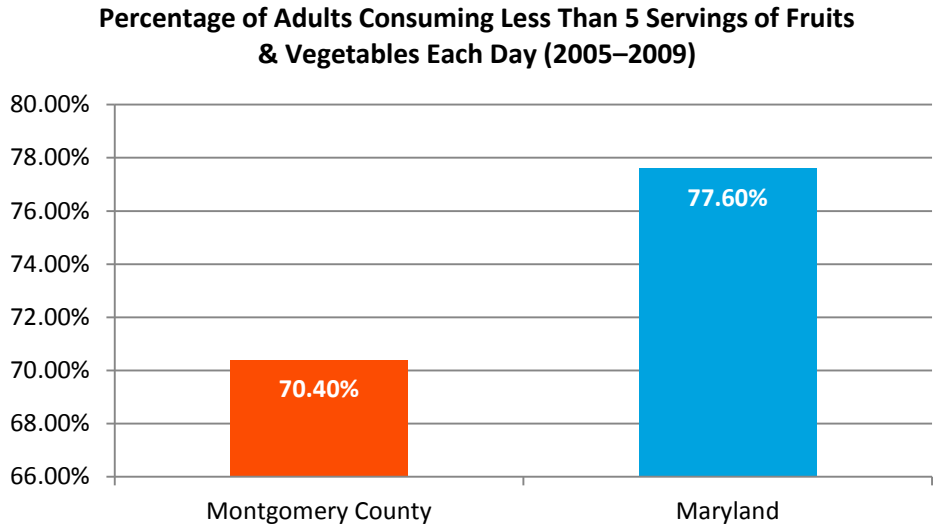


Figure 8. Percentage of Adults Consuming Less Than 5 Servings of Fruits & Vegetables Each Day in 2013
(Source: Maryland Behavioral Risk Factor Surveillance System (BRFSS), 2013)

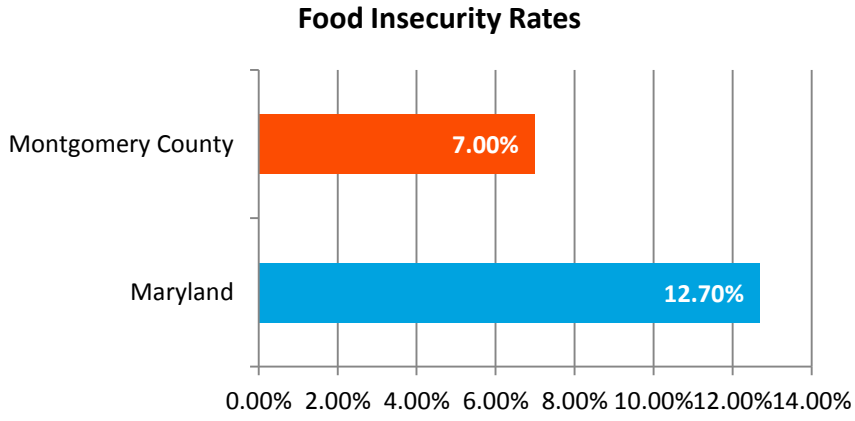


Figure 9. Percent of Food Insecure Population.
(Source: Feeding America. *Map the Meal Gap,* 2014)

[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

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, Montgomery County met the targets set forth by HP 2020 and SHIP 2017 for percentage of physically active adults. The overall Maryland state participation level decreased from 2012 to 2013 (Figure 10).[13]

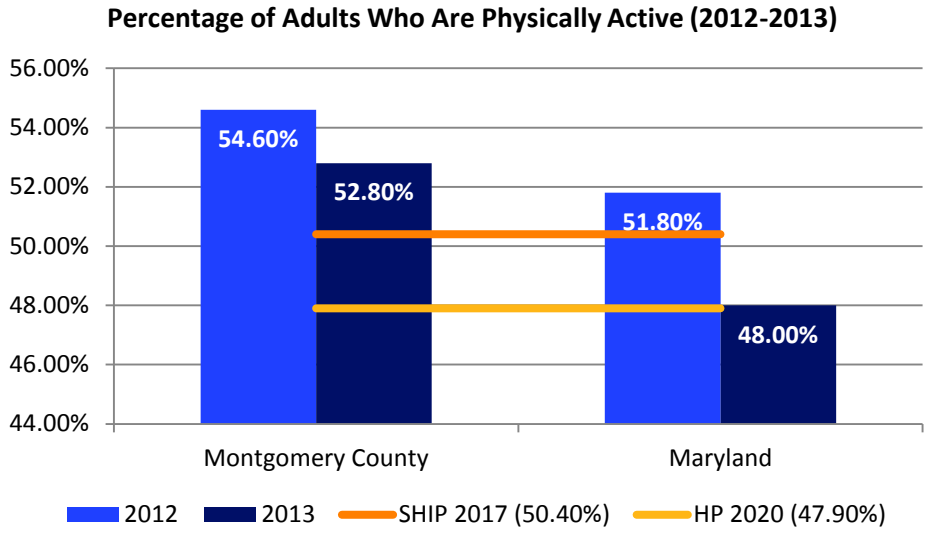


Figure 10. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week in 2013
(Source: BRFSS, 2013)

Hispanics have the lowest percentage of physically active adults in Montgomery County with only 25.25 percent engaging in 150 minutes of physical activity a week. Every other racial group meets both the HP2020 and SHIP2017 targets (Figure 11).

[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

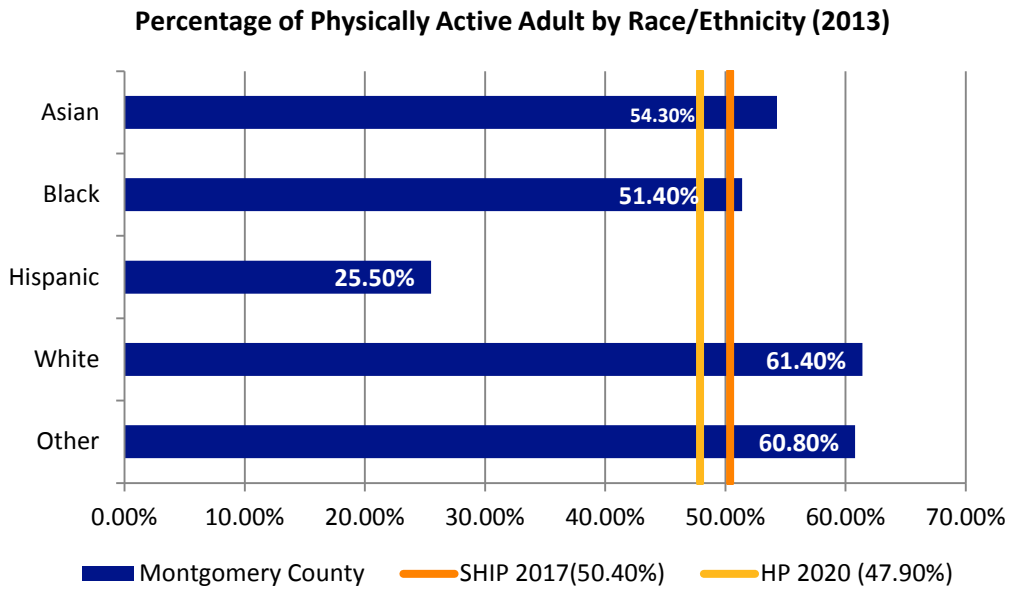


Figure 11. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week By Race/Ethnicity in 2013
(Source: BRFSS, 2013)

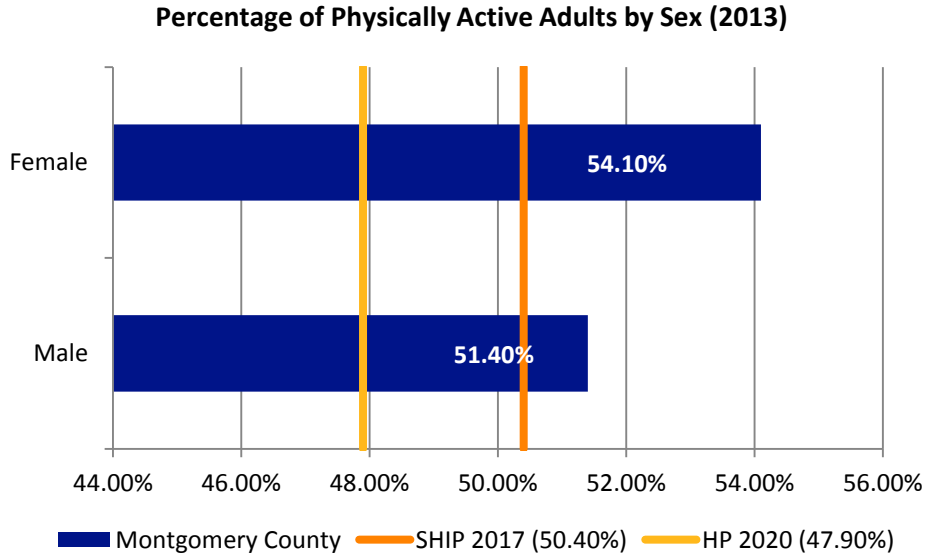


Figure 12. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week By Sex in 2013
(Source: BRFSS, 2013)

In Montgomery County, the rate of participation in physical activity increases with increasing age. About 50 percent of 18-44 years olds participate in physical activity while almost 60 percent of 65+ year olds participate in at least 150 minutes of physical activity a week (Figure 13).

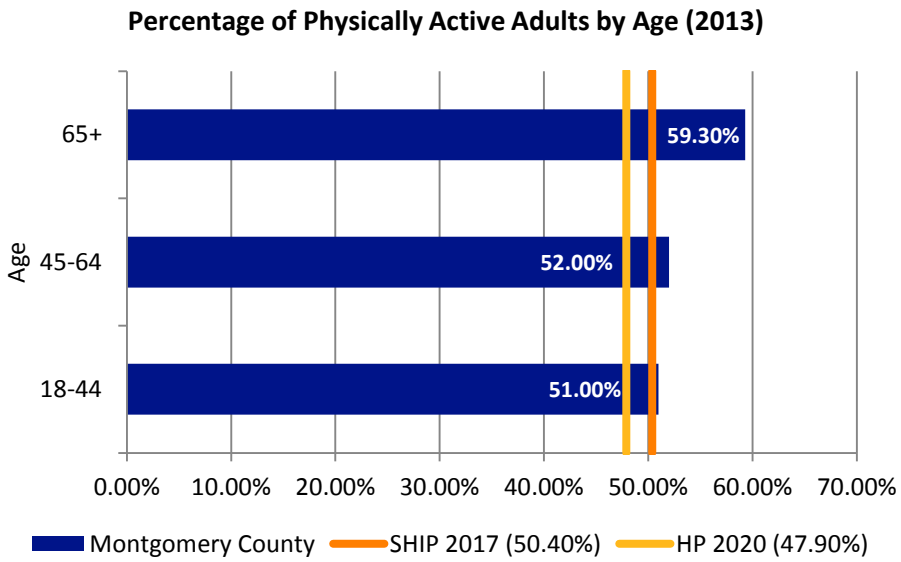


Figure 13. Percentage of Adults That Participate in 150 Minutes of Physical Activity a Week By Age in 2013
(Source: BRFSS, 2013)

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 requirement 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 to prevent or reduce obesity are often incorporated within other programs addressing diabetes, heart disease, and cancer. In Montgomery County, there are local efforts in schools, clinics, and recreational centers to reduce and prevent obesity, including, but are not limited to:

- The Women, Infants, and Children (WIC) program addresses obesity prevention through nutrition education.
- Montgomery County's master plan for parks incorporates trails for walking, hiking and biking around the county.
- Farmers markets provide benefits of promoting nutrition education and eating habits and provide access to fresh and naturally grown fruits and vegetables.
- The City of Rockville Department of Recreation offers various activities that encourage the community to "Step Up to Health". Activities/programs offered are: WALK Rockville; and Take a Walk About Town Center.

There are also numerous programs on the national level that can be implemented at the local level. The USDA, HHS, and National Institutes of Health all provide resources and educational materials for local initiatives.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 5: Maternal & Child Health

Maternal & Infant Health

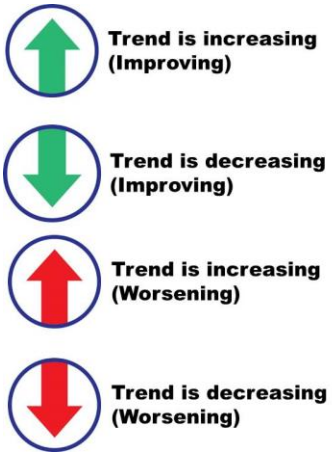
KEY FINDINGS

- 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.

- 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 & Infant 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 U.S. 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.[2,3] 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 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 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

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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

in the U.S. 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 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 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 to 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 of white women, a disparity that has persisted since the 1940s. There is a similarly large disparity in the rates among

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

[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

Black and white women in Maryland (Figure 1). In 2013, a total of two women in Montgomery County died of pregnancy-related reasons.[15]

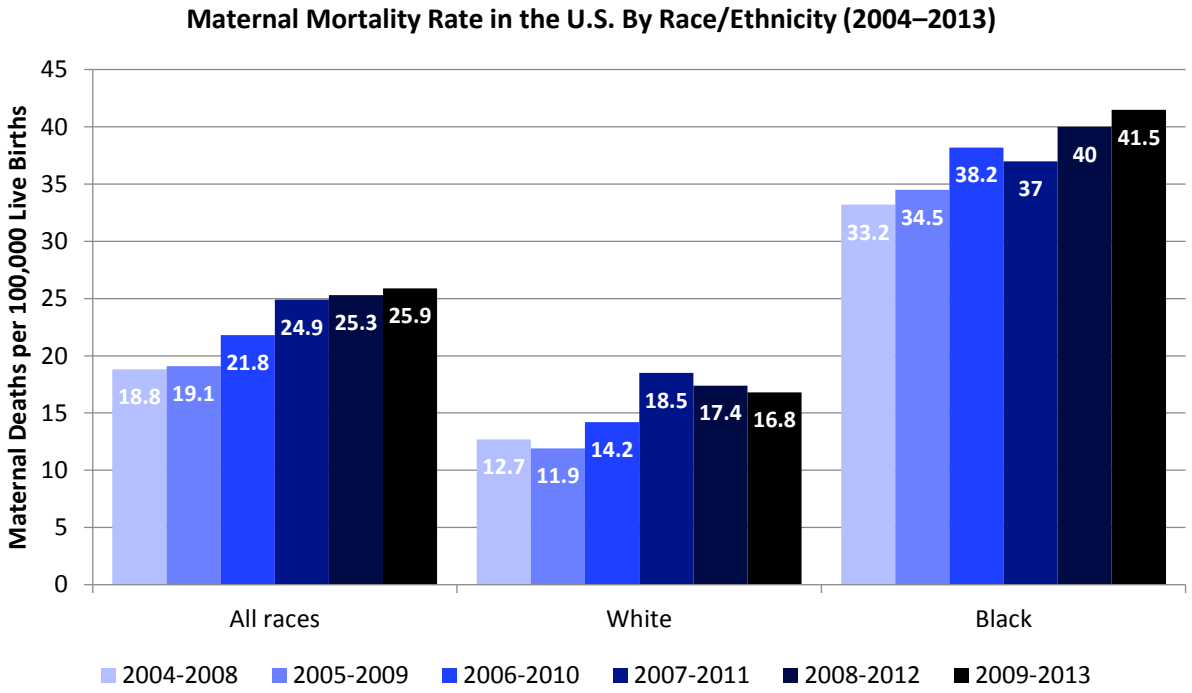


Figure 1. Maternal Mortality Rate in the United States by Race, 2004–2012.
(Source: Maryland Department of Health and Mental Hygiene (DHMH), 2015)

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 percent of deaths that year. After the first month of life, SIDS was the leading cause of infant death responsible for 37 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 2010 (Figure 2). Montgomery County met the Healthy People 2020 target of 6 deaths per 1,000 and the SHIP 2017 target of 6.3 deaths per 1,000. 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 (Figure 3).

[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

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

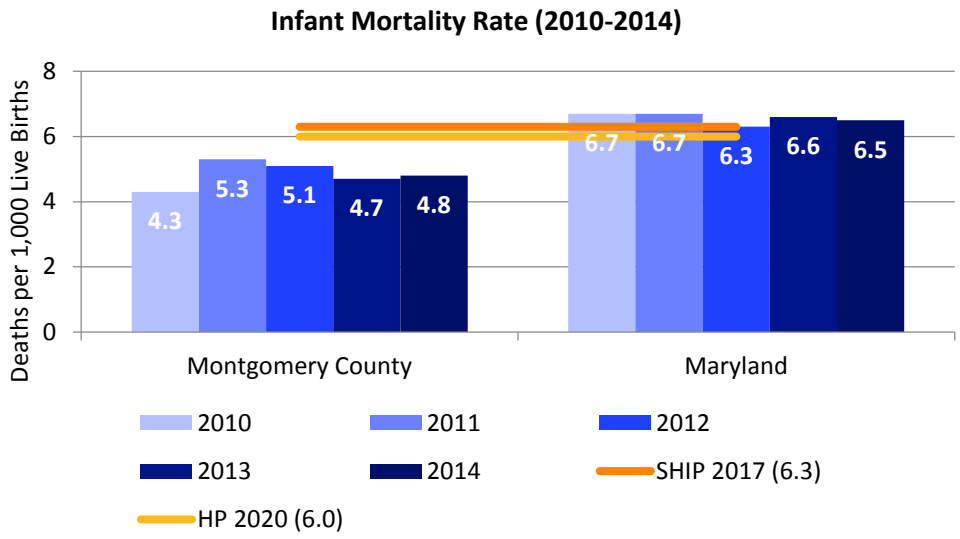


Figure 2. Infant Mortality Rate, 2009–2014.
(Source: State Health Improvement Process (SHIP), 2015)

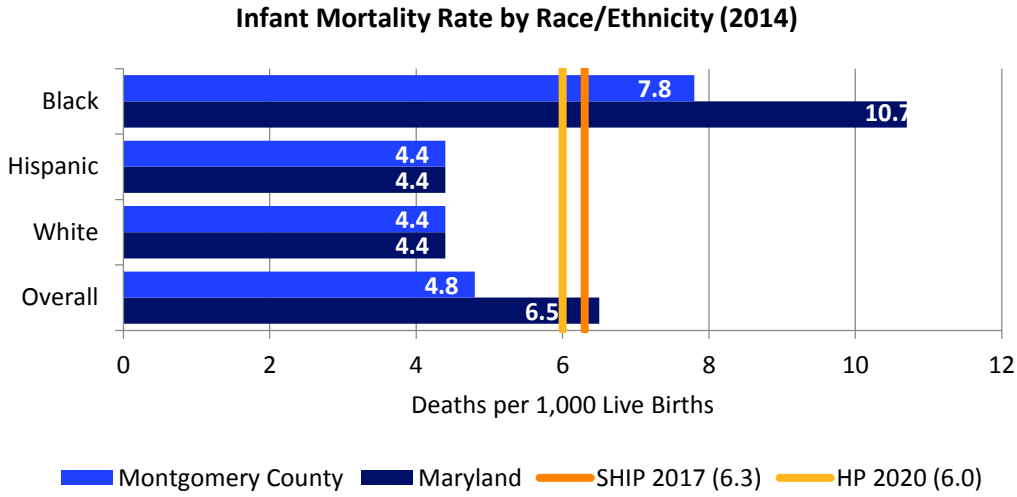


Figure 3. Infant Mortality Rate by Race, 2014.
(Source: DHMH, 2014)

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 4) and 1.3 percent were born with very low birth weight (Figure 5).

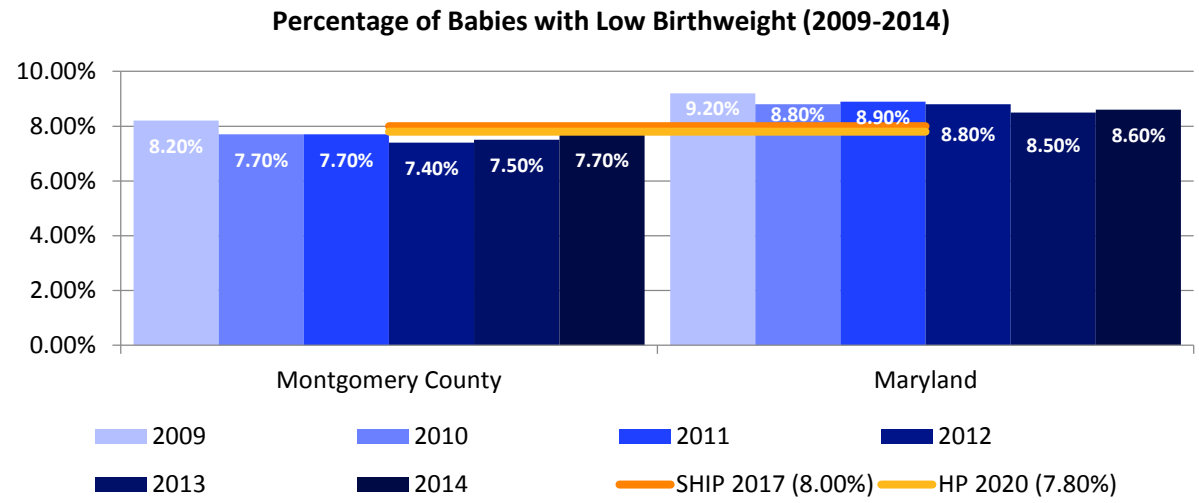


Figure 4. Percentage of Babies with Low Birthweight, 2009–2014
(Source: DHMH, 2014)

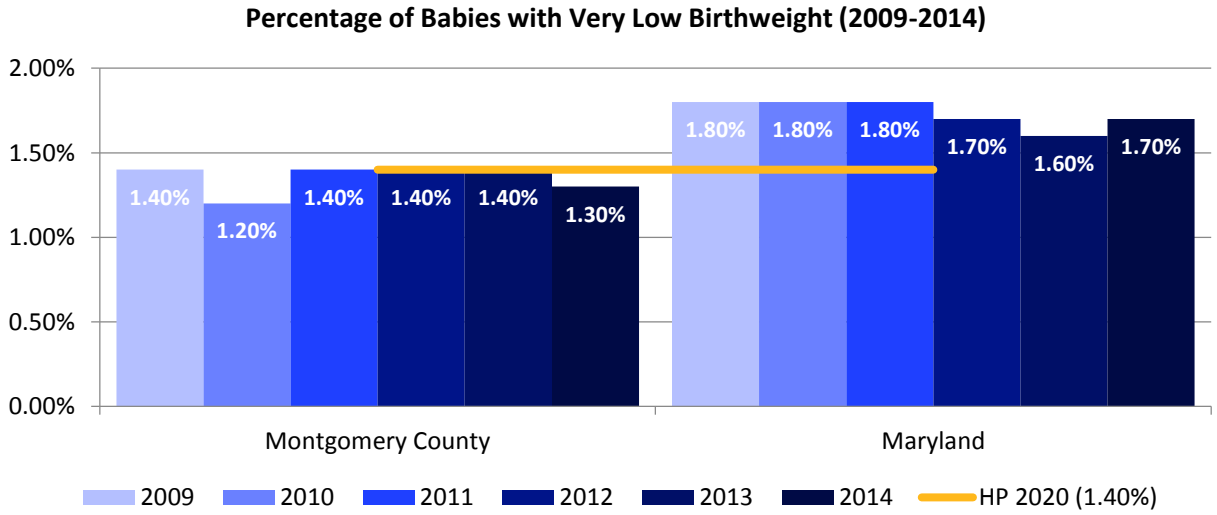


Figure 5. Percentage of Babies with Very Low Birthweight, 2009–2014
(Source: DHMH, 2014)

When looking at birth weight by race, it is clear that disparities exist. In Montgomery County, white infants have the lowest prevalence of low birthweight (5.8%) and very low birthweight (0.8%) while Black infants have the highest prevalence for both measures and far exceeded the SHIP 2017 and HP 2020 targets(Figures 6 and 7). In the state of Maryland overall, Asians/Pacific Islanders have the highest prevalence of low birthweight babies (8.6 percent) while whites have the highest prevalence for very low birthweight (2.7 percent) (Figures 6 and 7).

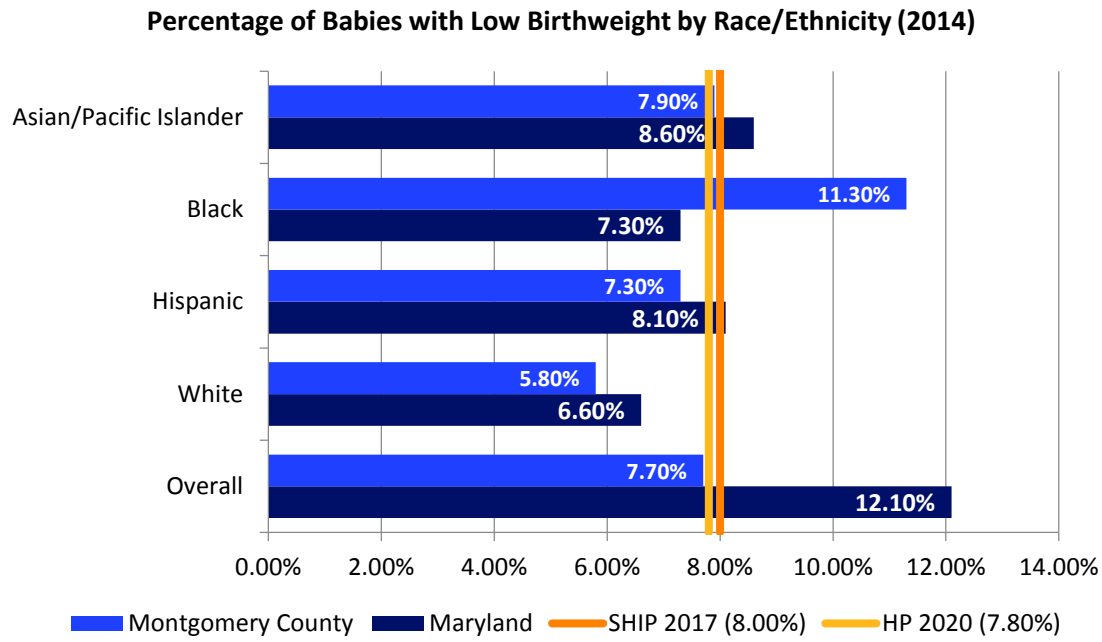


Figure 6. Percentage of Babies with Low Birthweight by Race/Ethnicity, 2014
(Source: DHMH, 2014)

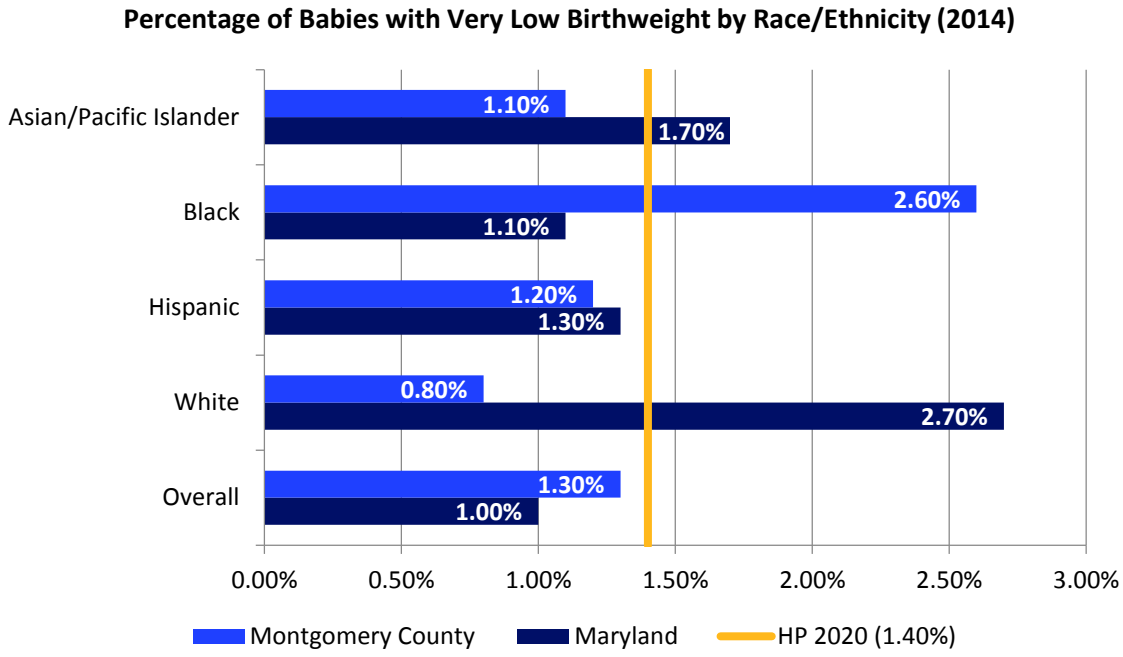


Figure 7. Percent of Babies with Very Low Birthweight by Race/Ethnicity, 2014
(Source: DHMH, 2014)

Age also appears to play a role in the prevalence of low and very low birth weight rates. In Montgomery County, the ages of mothers with the highest prevalence of low birthweight include the youngest and oldest age groups (Figure 8) 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 9).

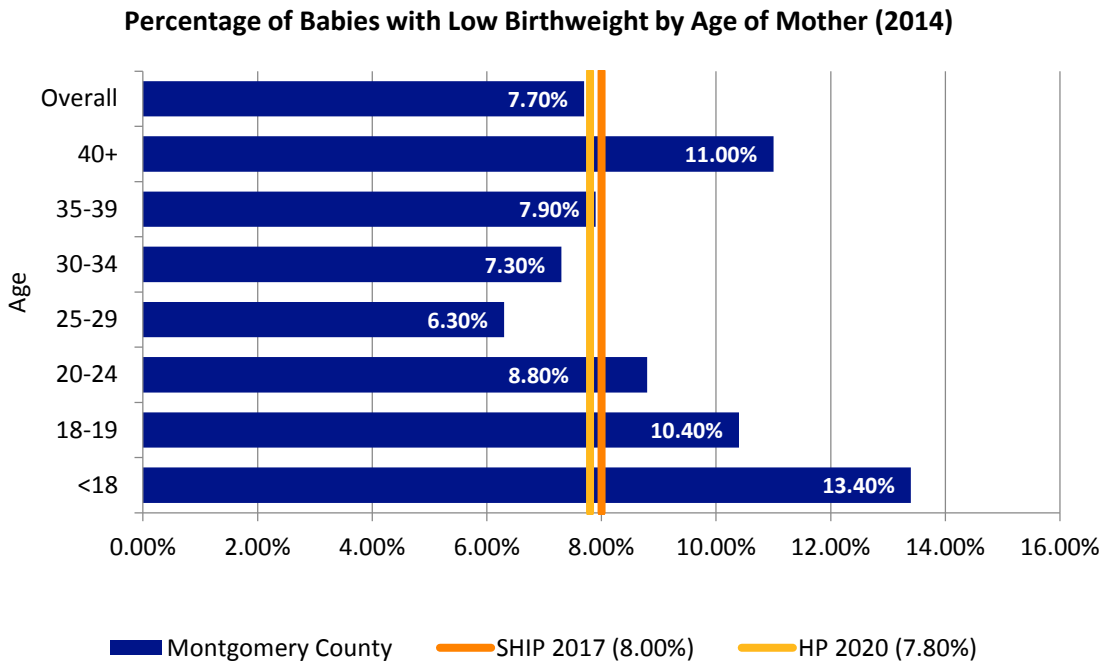


Figure 8. Percentage of Babies with Low Birthweight, By Age of Mother, 2014
(Source: DHMH, 2014)

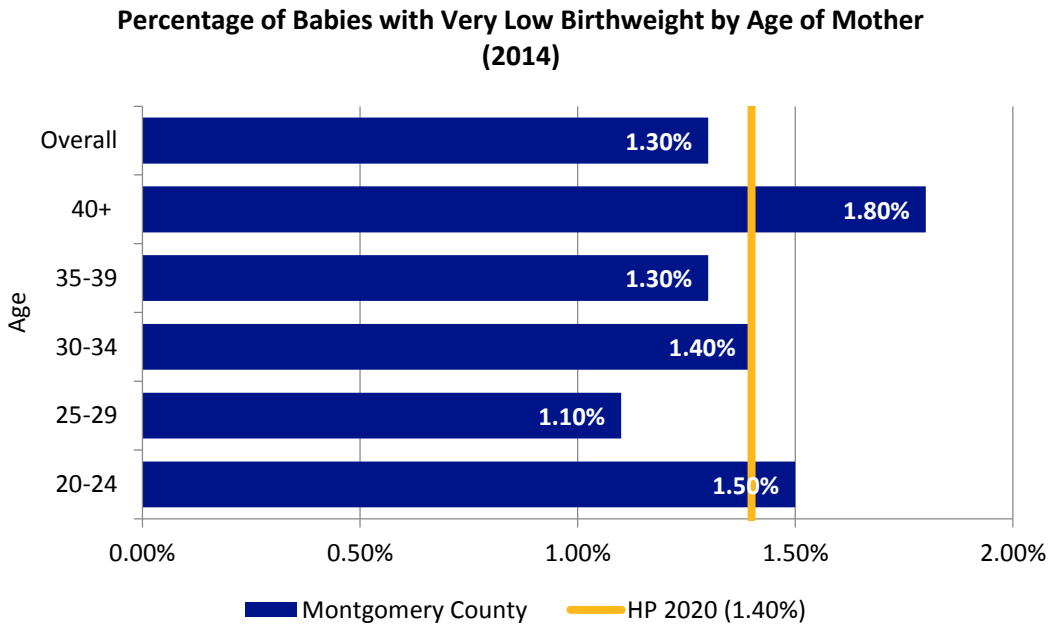


Figure 9. Percentage of Babies with Very Low Birthweight, By Age of Mother, 2014
(Source: DHMH, 2014)

Receipt of Prenatal Care

While the percentage of mothers receiving prenatal care appears to be trending in a positive direction in the Montgomery County, it did not meet the HP 2020 or SHIP 2017 targets in 2014. Only 64.4% of mothers in Montgomery County received early prenatal care (Figure 10).

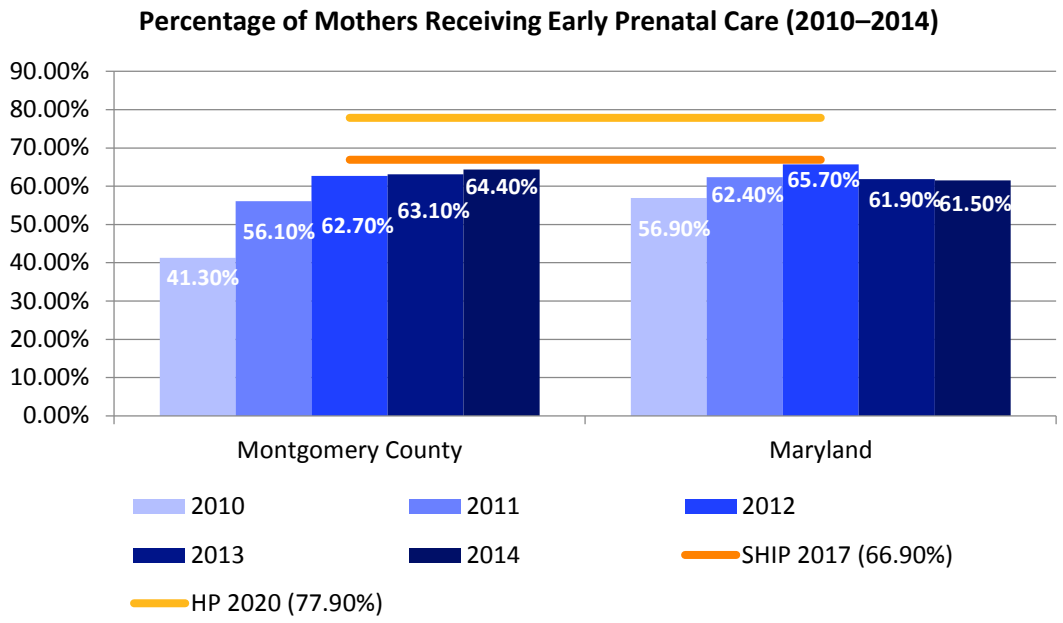


Figure 10. Percentage of Mothers Receiving Early Prenatal Care, 2010–2014
(Source: DHMH, 2014)

Disparities exist across races for Montgomery County. Approximately 80.1% of non-Hispanic white women and 71.7% of Asian/Pacific Islander women received care. In comparison, only 52.8% percent of Black women and 47.4% of Hispanic women received early prenatal care, and do not meet either the HP 2020 or SHIP 2017 target. Only white women meet both targets in the county (Figure 11).

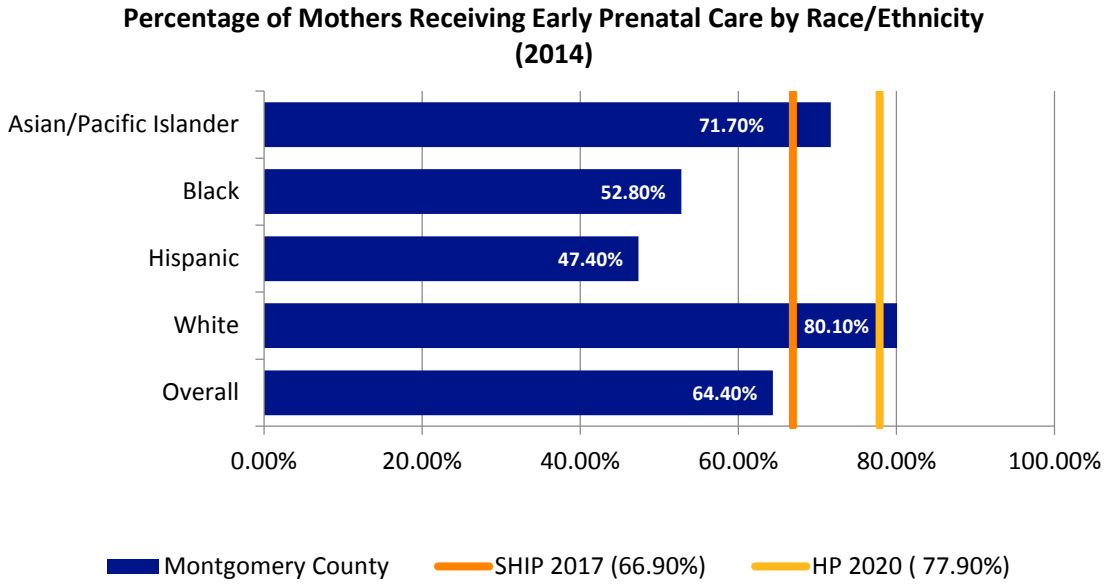


Figure 11. Percentage of Mothers Receiving Early Prenatal Care by Race/Ethnicity, 2014
(Source: DHMH, 2014)

Disparities also exist across different mother age groups. Women are more likely to receive prenatal care as they get older with only 21.4% of women less than 18 years of age receiving early care while 70.9% of women 35 years of age and older received early prenatal care (Figure 12). Only women 30 years and older met the SHIP2017 target for receiving early prenatal care.

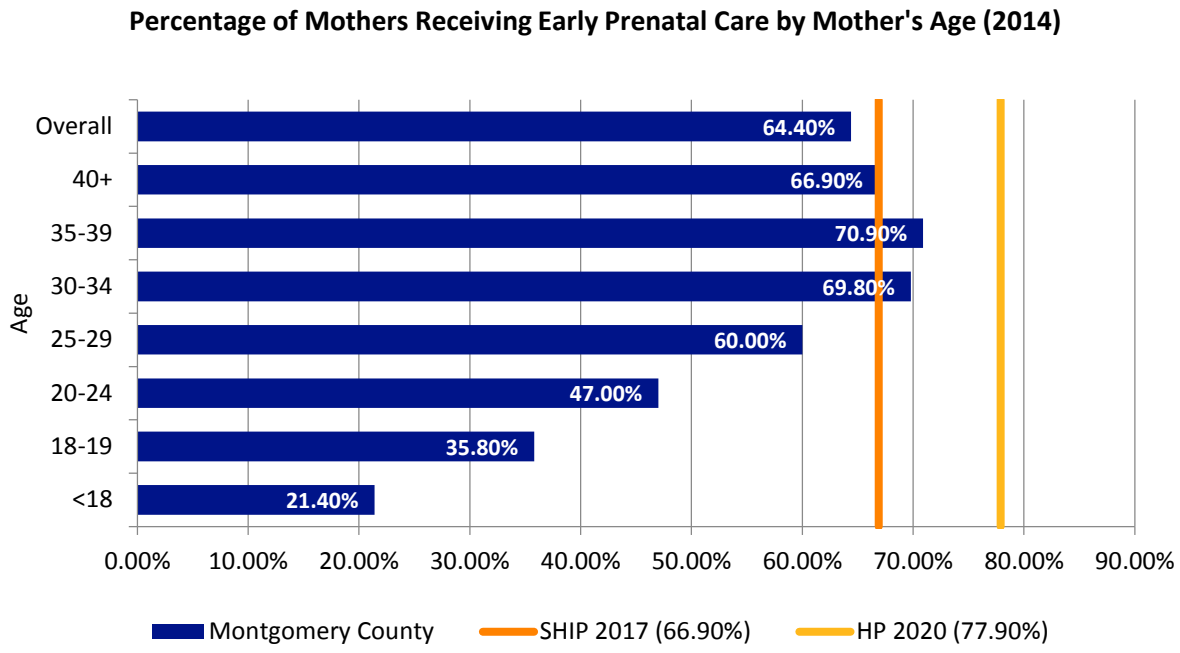


Figure 12. Percentage of Mothers Receiving Early Prenatal Care by Mother Age, 2014
(Source: DHMH, 2014)

Teen Pregnancy

The teen birth rate has been on a steady decline in Montgomery County from 2009-2014. The SHIP 2017 target was met in 2010 and has continued to decrease since then (Figure 13). Racial disparities exist with all race/ethnicity groups meeting the SHIP 2017 target in 2014 except for Hispanics (Figure 14).

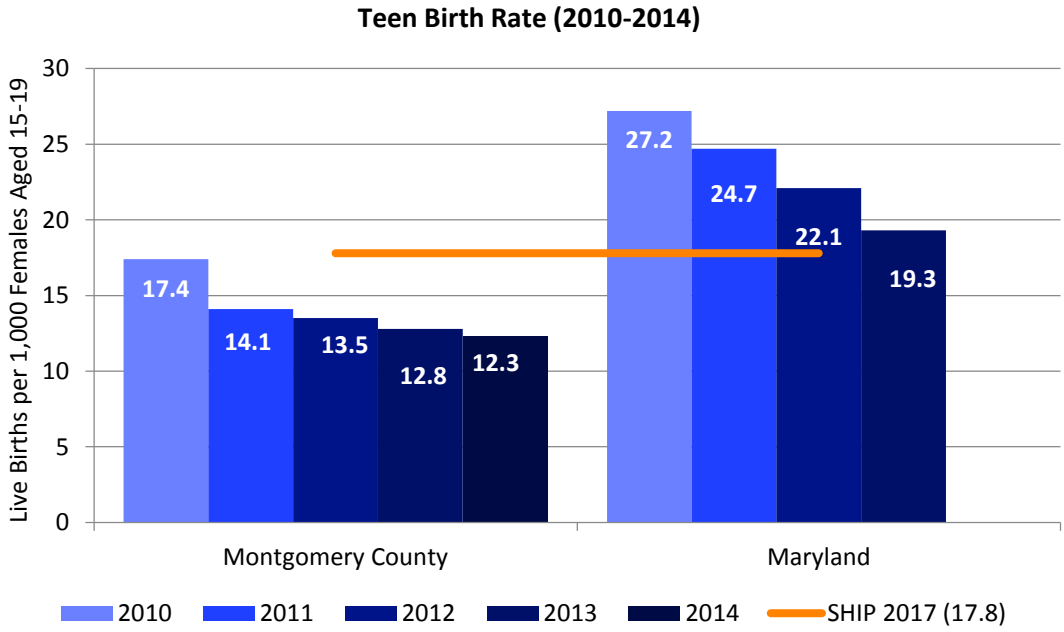


Figure 13. Teen Birth Rate, 2010–2014
(Source: DHMH, 2014)

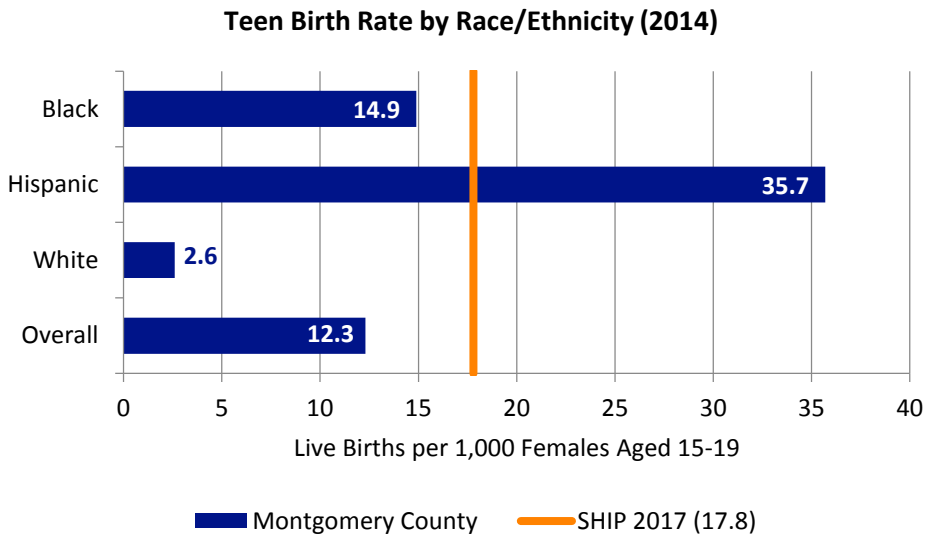


Figure 14. Teen Birth Rate by Race, 2014
(Source: DHMH, 2014)

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 (Figure 15).

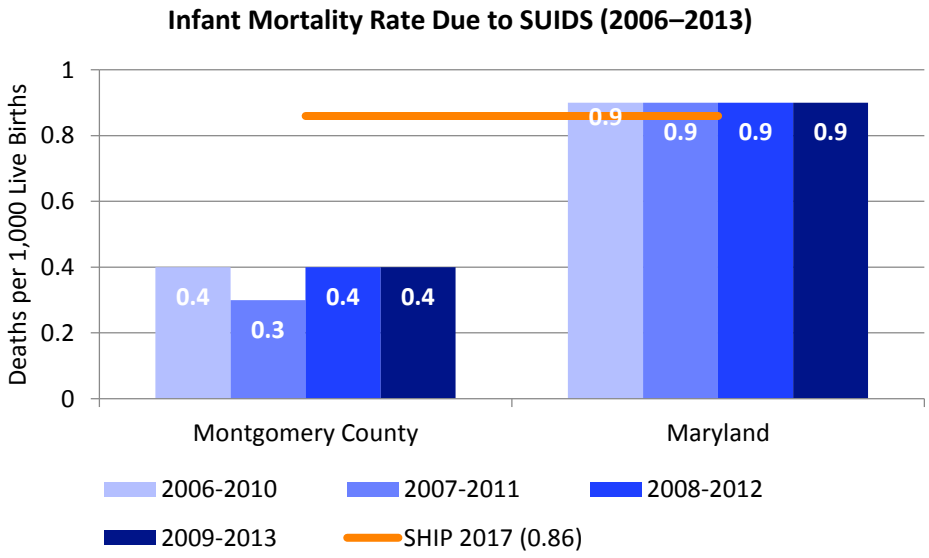


Figure 15. Infant Mortality Rate Due to SUIDS, 2006–2013
(Source: DHMH, DHMH - Maryland State Health Improvement Process (SHIP), 2013)

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 six 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 (Figure 16).

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 17).

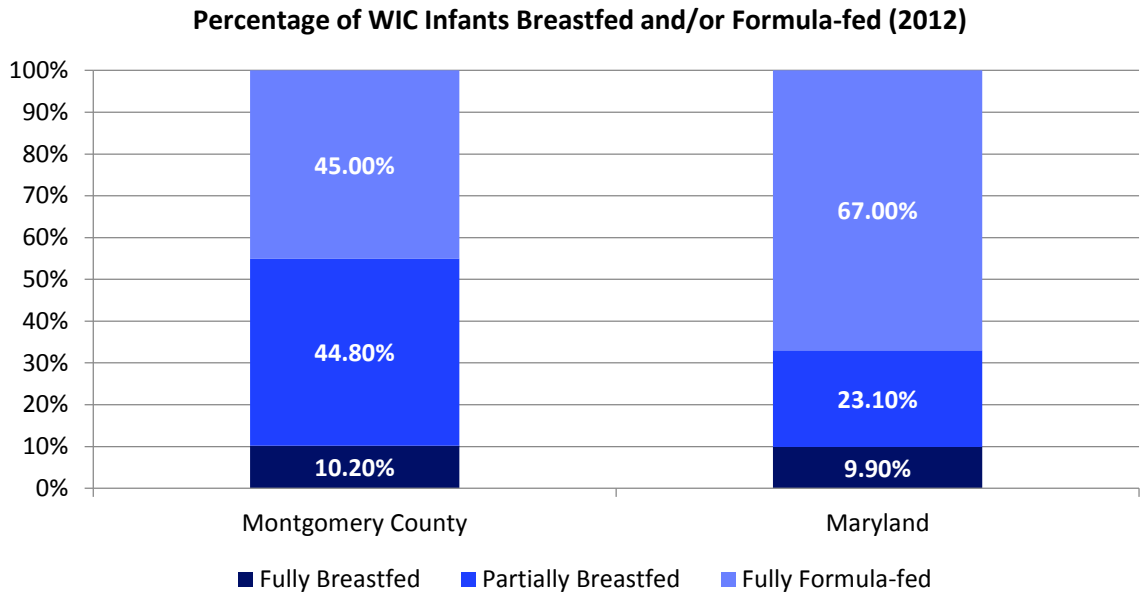


Figure 16. Percent of WIC Infants Breastfed and/or Formula-fed, 2012
(Source: CDC, 2012)

[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/

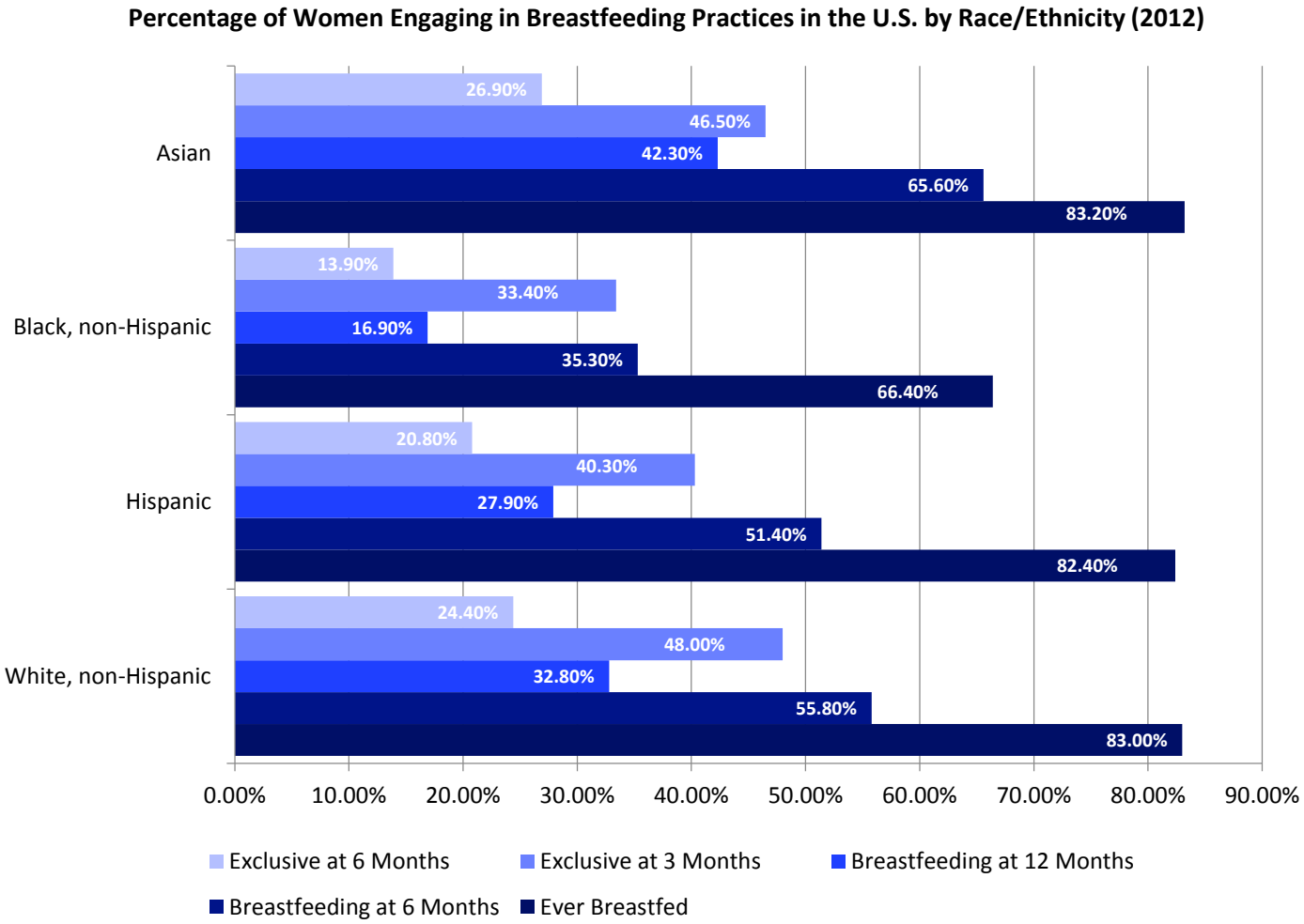


Figure 17. Percent of Women Engaging in Breastfeeding Practices in the United States by Race, 2012 (Source: CDC, 2012)

Community Resources

Shady Grove Medical Center's Community Benefit Service Area has maternal and infant health services available to residents from both private and public providers. Services range from prenatal care to infant health care and are available in several settings.

- Shady Grove Medical Center offers a full spectrum of services for expectant mothers, new mothers, and infants. In addition to having a Birth Center with specialized services, child birth education classes are offered. Free post-partum support groups are also available, and lactation consultants are also available.
- Montgomery County Health department works with three local hospitals – Holy Cross Hospital, Washington Adventist Hospital, and Shady Grove Medical Center – to provide prenatal services to low-income and uninsured residents. This program provides 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. Case management services include education, assessment and referral, and assistance to clients in accessing health, economic, and self-sufficiency services and programs.
- Women who believe they are pregnant can go to the Germantown and Silver Spring Health Centers for urine pregnancy testing and counseling, which is supported through the Montgomery County Department of Health and Human Services.
- 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.
- To address teen pregnancy, school nurses work in accordance with Maryland state regulations providing Montgomery County Public School (MCPS) students with education and referrals that promote healthy lifestyle choices. Male and female students can meet with their school nurse for a one-on-one meeting and receive accurate information regarding their reproductive health. The school nurse can refer to community partners for more resources, as needed. In the classroom, school nurses follow MCPS curriculum when providing information.
- The Teen Parent Support Program provides peer group education on raising children, healthy relationships, and prevention of repeat teenage pregnancy. The support groups are led by school nurses and assisted by Montgomery County Public School (MCPS) staff and/or community partners and are available in all high schools, depending on need. The facilitated support groups are made up of MCPS students who are pregnant and/or parenting. The groups meet during the school day and provide an opportunity for teens to share their experiences, learn from peers, and gain knowledge through presentations and discussion with the school nurse, MCPS staff and community partners.
- Additional services and resources include the WIC program, safety net clinics, and mental health care for pregnant women and new mothers at risk for depression, home visitation services to first time parents, and well-baby care programs.
- The Improved Pregnancy Outcomes Program, provided by the Montgomery County Department of Health and Human Services, works with mothers who have experienced a fetal or infant loss and gives them the opportunity to share their experience and learn how to improve birth outcomes and the overall well-being of women, infant and families.
- Montgomery County Child Center and Adult Services offers a program, Healthy Mothers, Healthy Babies, which provides outpatient mental health care for pregnant women and recent mothers who might be at risk for depression.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 6: Behavioral Health

6.1 Mental health

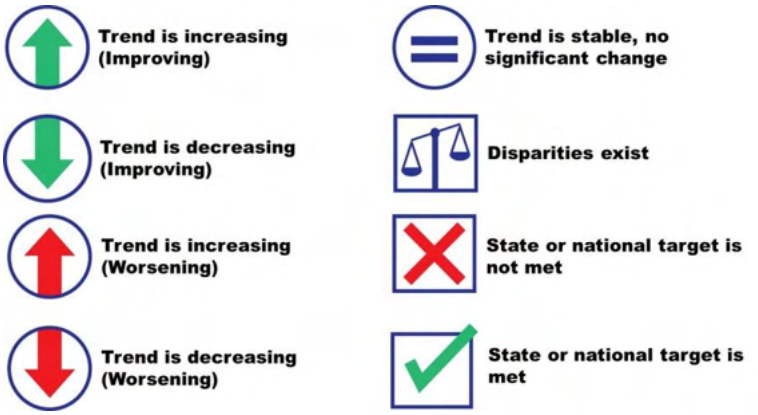
6.2 Substance Abuse

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

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) has been steady since 2008.
- Montgomery County meets the SHIP 2017 and HP 2020 targets for suicide rates.
- Across racial groups, whites are the most disproportionately burdened group by suicide in Montgomery County.
- 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.
- Black Montgomery County residents had the highest ER utilization rates for illnesses related to mental health, substance abuse, and Alzheimer's or other dementias.
- Blacks in Montgomery County have the highest smoking rate compared to their respective racial counterparts.
- The drug-induced death rate is highest among whites in Montgomery 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 Shady Grove Medical Center mainly serves Montgomery County. Montgomery County has slightly fewer mentally unhealthy days at an average of 2.7 days per month than Maryland overall at 3.4 poor mental health days per month.[4] This is demonstrated by the self-reported good mental health figures below (Figures 1, 2, and 3). Hispanics and whites in Montgomery County report the highest 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 the county. Males in Montgomery County also report higher rates of good mental health than females.

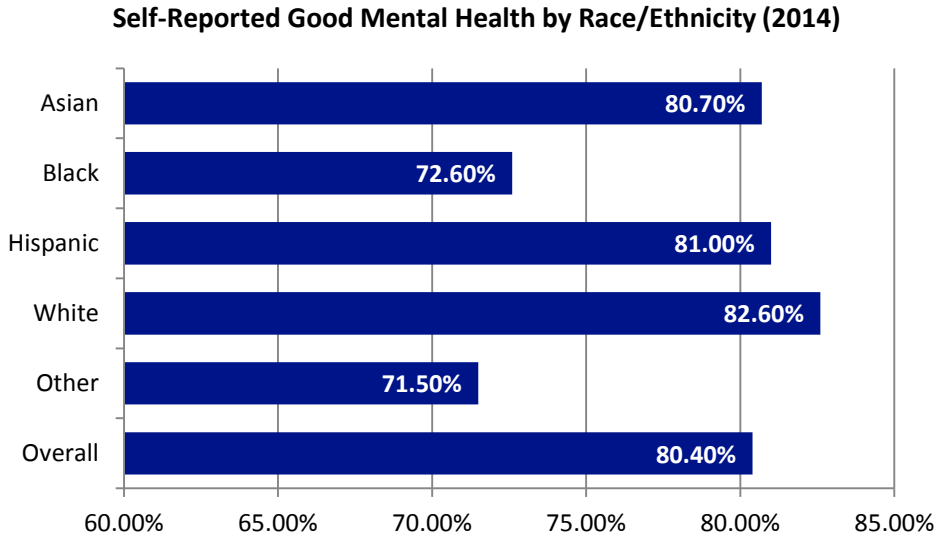


Figure 2. Self-Reported Good Mental Health by Race/Ethnicity in Montgomery County
(Sources: Healthy Montgomery, 2014)

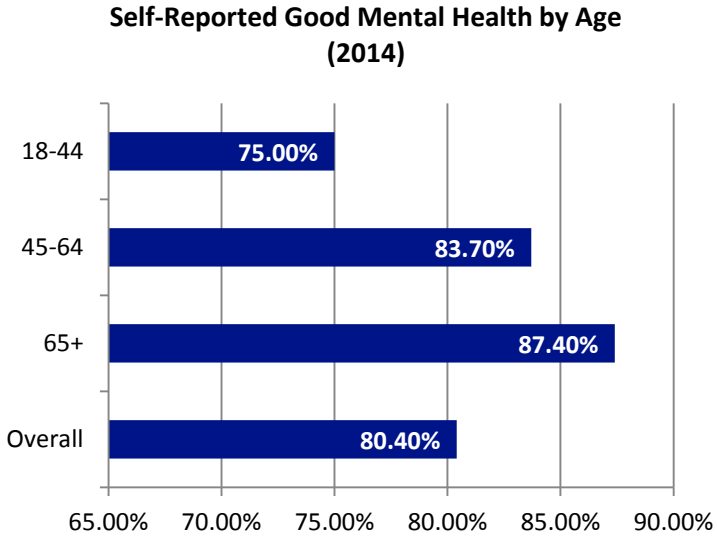


Figure 2. Self-Reported Good Mental Health by Age in Montgomery County
(Sources: Healthy Montgomery, 2014)

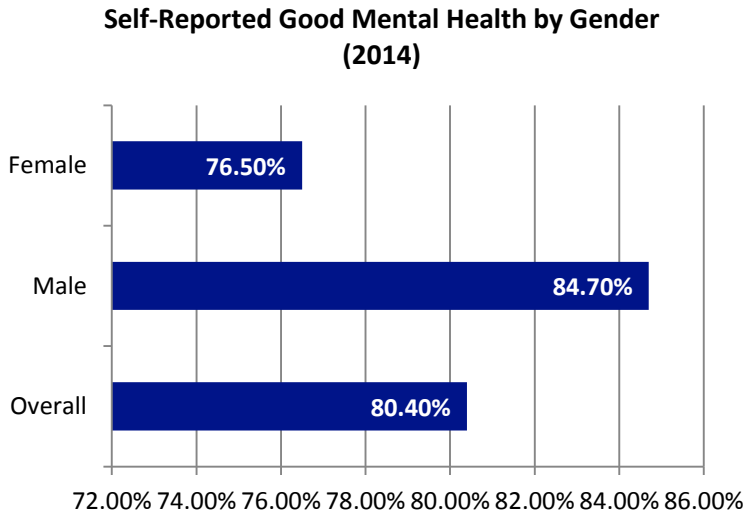


Figure 3. Self-Reported Good Mental Health by Gender in Montgomery County
(Sources: Healthy Montgomery, 2014)

[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

Social and emotional supports contribute to one's mental health. Approximately 83 percent of Montgomery County residents report having adequate social and emotional support (Figure 4). Whites report the highest level of support while Latinos report the lowest.

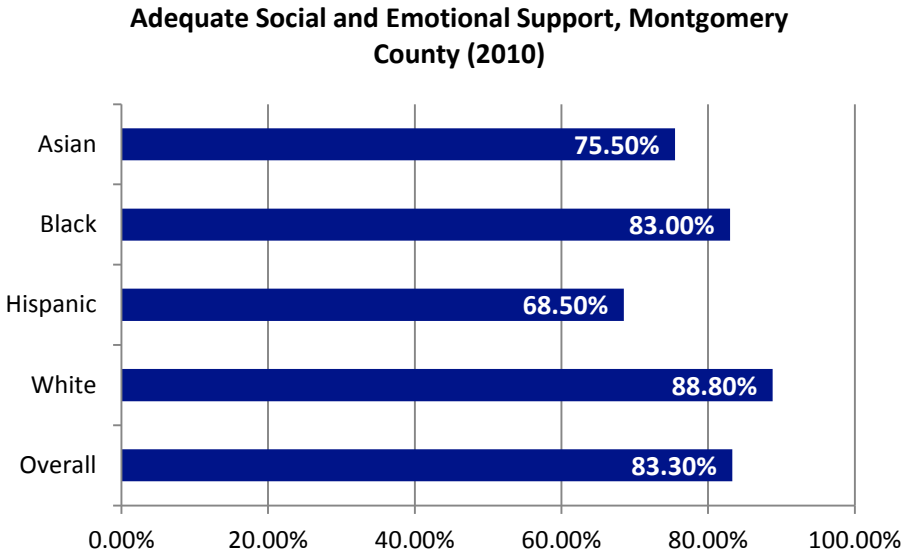


Figure 4. Adequate Social and Emotional Support, Montgomery County
(Source: Healthy Montgomery, 2010)

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 5). 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 6). Females were also diagnosed with depression at a higher rate than males (Figure 7).

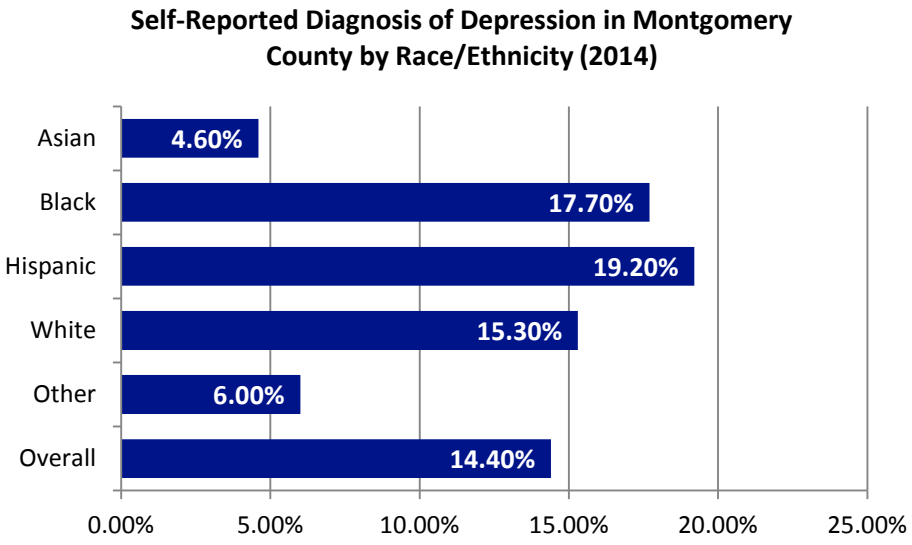


Figure 5. Self-Reported Diagnosis of Depression in Montgomery County by Race/Ethnicity
(Source: Healthy Montgomery, 2014)

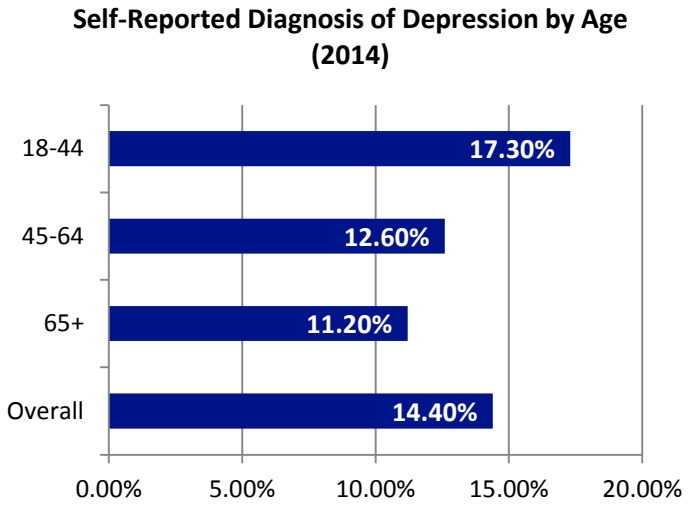


Figure 6. Self-Reported Diagnosis of Depression in Montgomery County by Age
(Source: Healthy Montgomery, 2014)

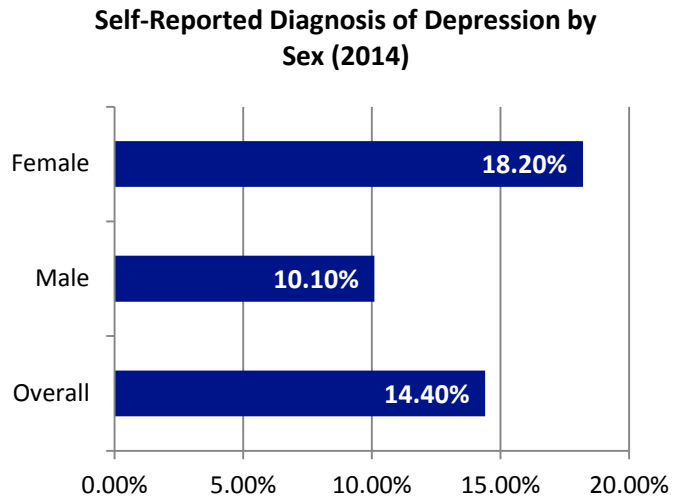


Figure 7. Self-Reported Diagnosis of Depression in Montgomery County by Sex
(Source: Healthy Montgomery, 2014)

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.[5] Of those youths, 72 percent suffered severe impairment due to the depressive episode (Figure 8).

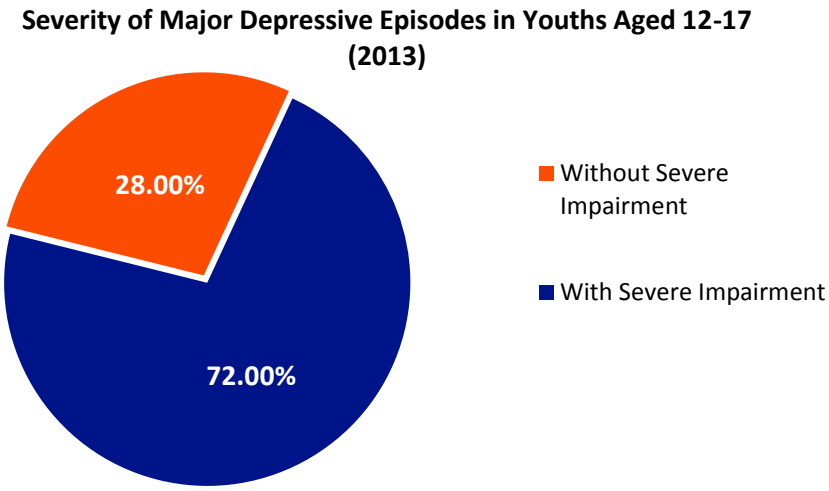


Figure 8. Severity of Major Depressive Episodes in Youths Aged 12-17
(Source: Behavioral Health in Montgomery County, 2013)

The rate of depression among the Medicare population is lower than that of the general population. Figure 9 below shows that the Medicare population in Montgomery has a high rate of depression than Maryland overall. It is worth

[5] 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

noting that the Medicare population under the age of 65 years is more prone to depression than those over the age of 65.[6]

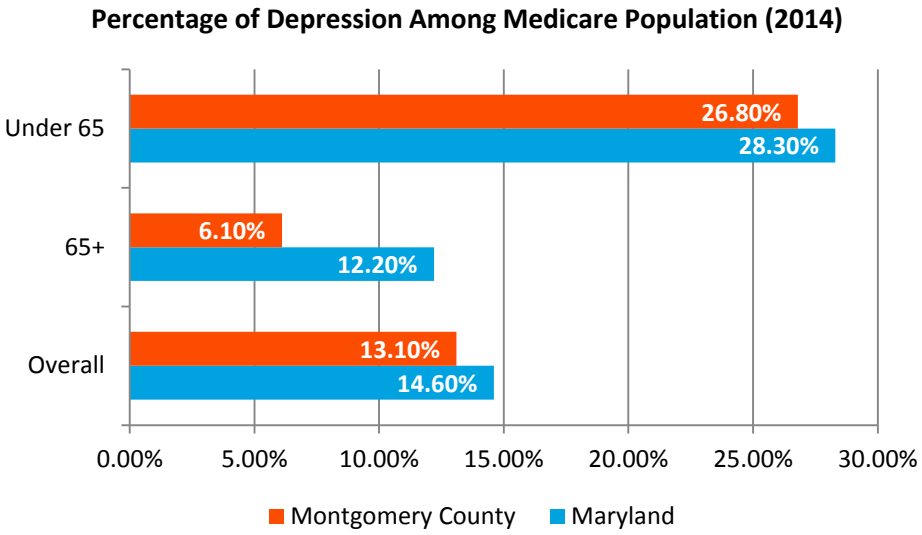


Figure 9. Depression among Medicare Population, 2014
(Sources: Healthy Montgomery & PGC Health Zone, 2014)

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.[7] 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 10). 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 11 and 12).

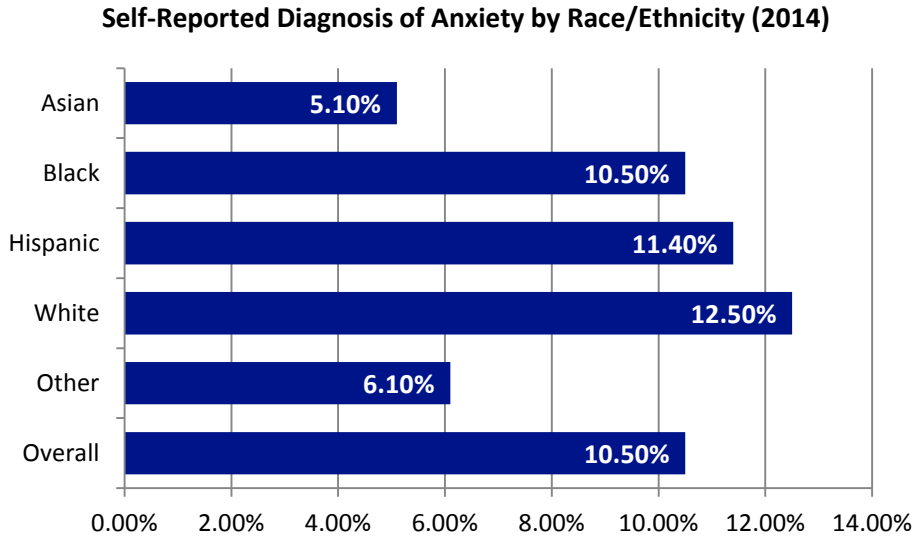


Figure 10. Self-Reported Diagnosis of Anxiety by Race/Ethnicity,

[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

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

Montgomery County
(Source: Healthy Montgomery, 2014)

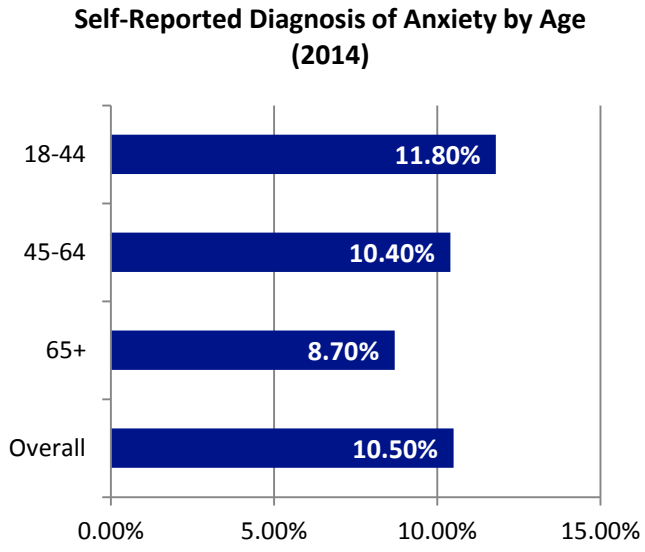


Figure 11. Self-Reported Diagnosis of Anxiety in Montgomery County by Age
(Source: Healthy Montgomery, 2014)

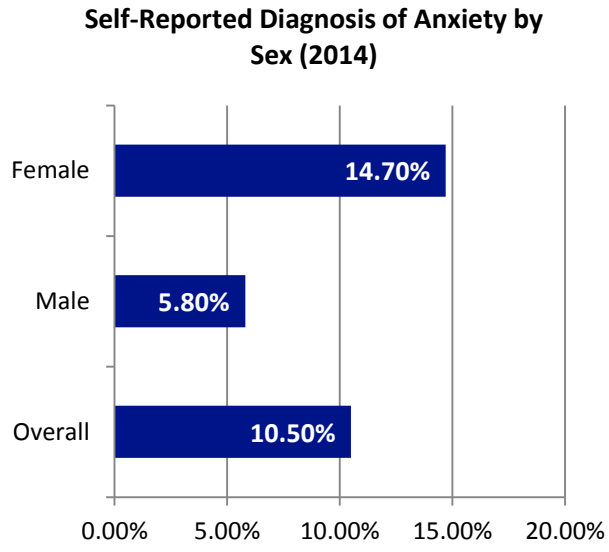


Figure 12. Self-Reported Diagnosis of Anxiety in Montgomery County by Sex
(Source: Healthy Montgomery, 2014)

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.[8] In the state of Maryland, suicide rate has been slightly increasing since 2008. However, the suicide rate in Montgomery County has been steady for the last three measuring periods (Figure 13). The county meets the SHIP target of 9 suicides per 100,000 and Healthy People 2020 target of 10.2.

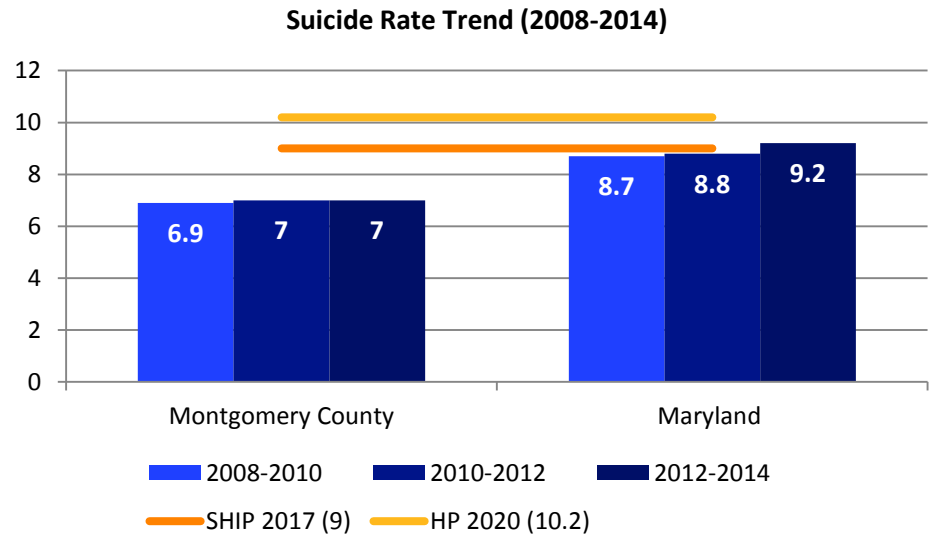


Figure 13. Suicide Rates Over Time in Montgomery County and Maryland
(Source: DHMH - State Health Improvement Process (SHIP), 2008-2014)

[8] 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

Although the SHIP and Healthy People targets are met, the suicide rate in the state overall is higher than that of Montgomery County. When further stratified by race and ethnicity, suicide rates are higher among the white population than the Black population in both Montgomery County and Maryland (Figure 14). 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 Maryland overall is 2.9 times higher than that of the Blacks in the state.

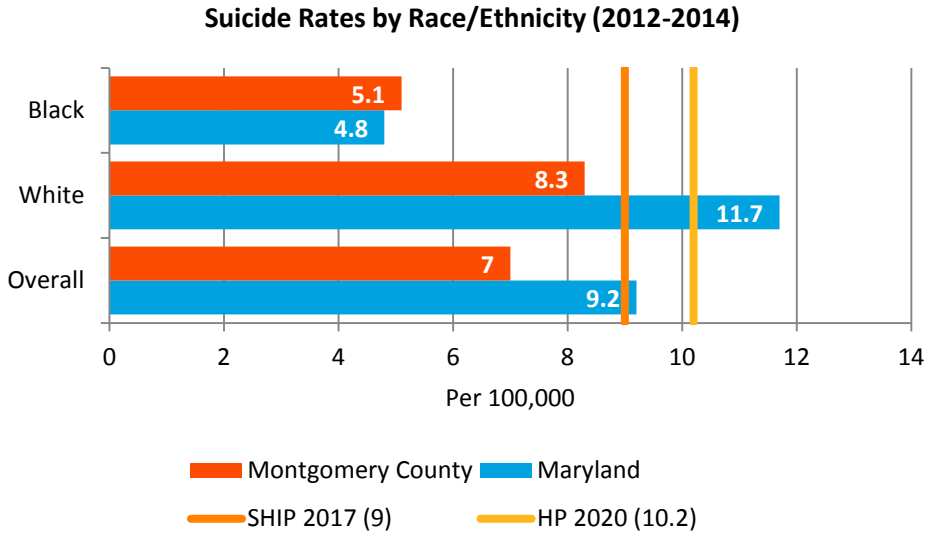


Figure 14. Suicide Rates by Race and Ethnicity in Montgomery County and Maryland (Source: SHIP, 2012-2014)

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.[9] Between July 2014 and June 2015, there were numerous deaths due to domestic violence in Maryland: 25 women, 15 men and two children[10]. Montgomery County met and fell well below the SHIP 2017 target of 445 domestic violence incidents per 100,000 population (Figure 15). The domestic violence rates in Maryland were significantly higher than that of Montgomery County.

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

[10] 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

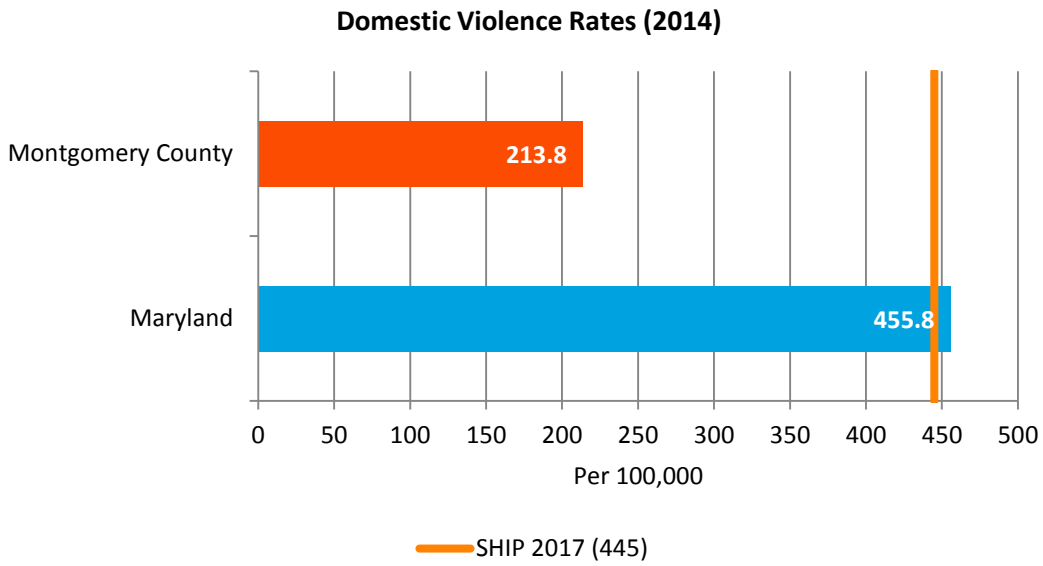


Figure 15. Domestic Violence Rates in Montgomery County and Maryland
(Source: SHIP, 2014)

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.11 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 16). Overall, the state of Maryland and Montgomery County met the SHIP 2017 target of 199.4 ER visits per 100,000 for this indicator. This ER utilization rate is highest among Maryland residents overall (194.1 per 100,000)when compared to Montgomery County (142.7 per 100,000). Further stratification of the ER utilization rates by race and ethnicity shows that Blacks in Maryland used the ER at a much higher rate (215.3 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.

[11] 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

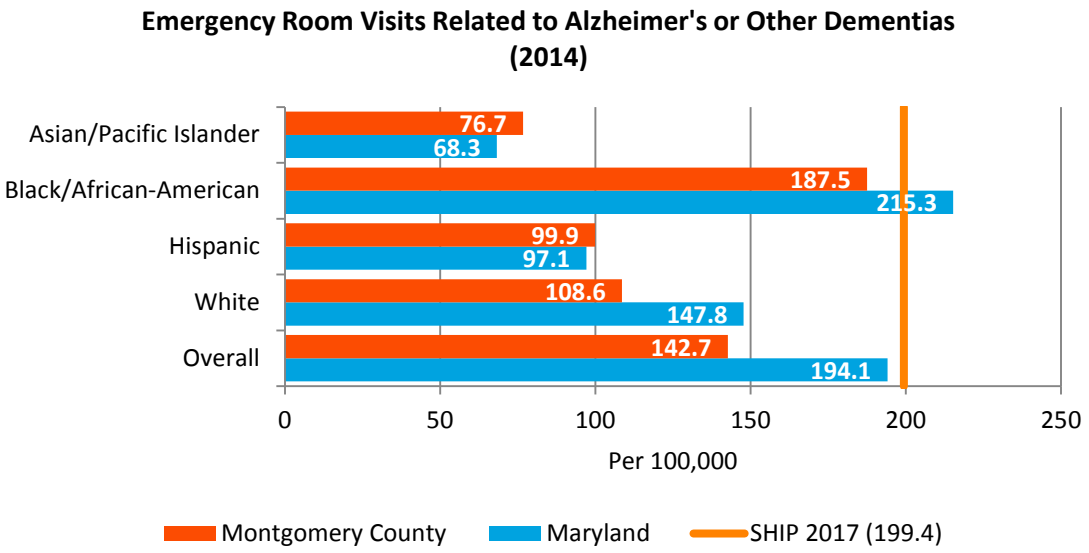


Figure 16. Emergency Room Visits Related to Alzheimer's or Other Dementias
(Source: SHIP, 2014)

Mental Health Disorders

Overall, the emergency department utilization rates related to mental health disorders were similar between Montgomery County and Maryland. Both met and fell below the SHIP 2017 target of 3152.6 ER visits per 100,000 populations (Figure 17). When stratified by race and ethnicity, Black residents of Montgomery County and white residents of Maryland had higher ER utilization rates than their racial counterparts in their respective counties.

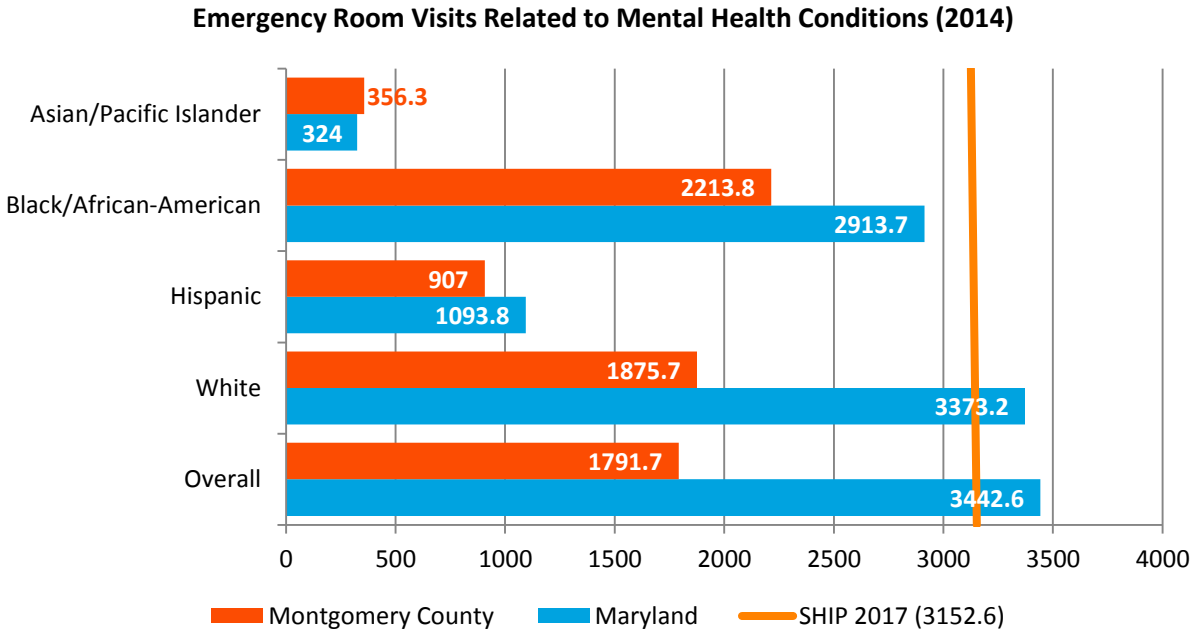


Figure 17. Emergency Room Visits Related to Mental Health Disorders
(Source: SHIP, 2014)

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.[12] 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 18). 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 County, the SHIP and Healthy People targets have been met since 2008. Despite this, the county and Maryland experienced increases in drug induced death rates since the 2010-2012 measurement period.

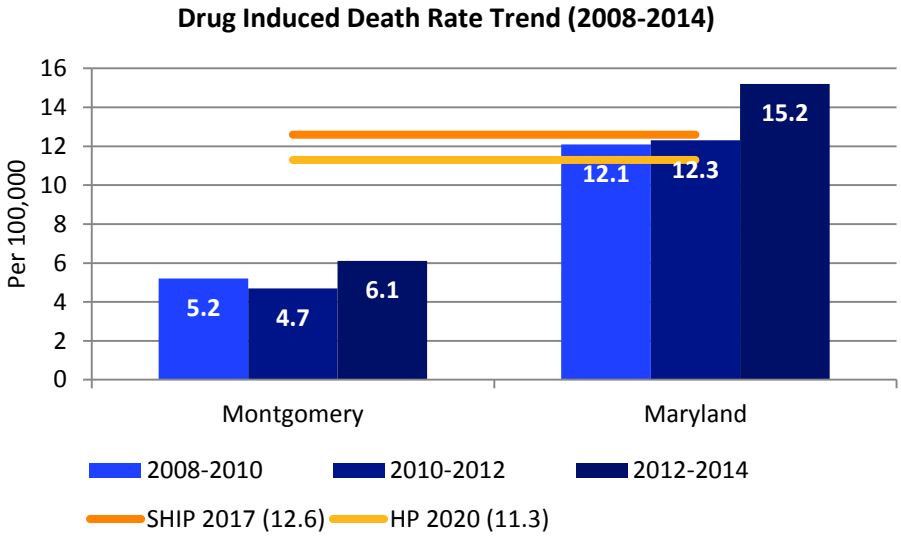


Figure 18. Drug Induced Death Rates in Montgomery County and Maryland
(Source: SHIP, 2008-2014)

Stratifying the data by race and ethnicity shows the similarities and differences in drug induced death rates in Montgomery County compared to the state of Maryland (Figure 19). There is a major difference in the drug-induced death rate of the Black and white population between Montgomery County and Maryland. Whites in Montgomery County experience drug-related deaths at a lower rate (8.8 per 100,000) than whites in Maryland (21 per 100,000) while Blacks in Montgomery County experience drug-related deaths at a rate of 4.9 per 100,000 while Blacks in Maryland overall experience almost three times that rate (Figure 19).

[12] 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

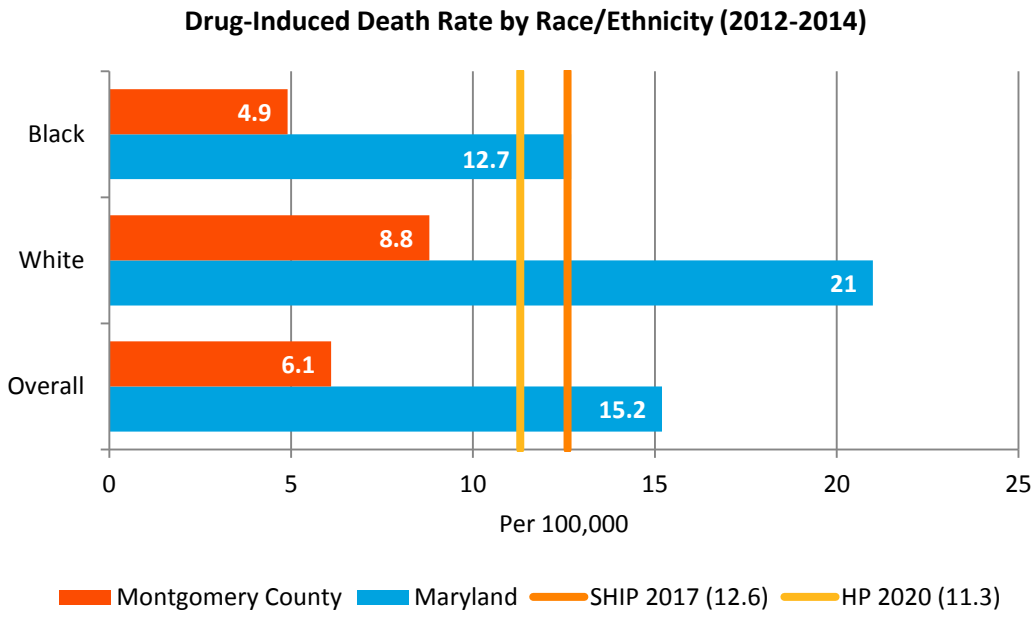


Figure 19. Drug Induced Death Rates by Race and Ethnicity
(Source: SHIP, 2012-2014)

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.[13] 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 20).

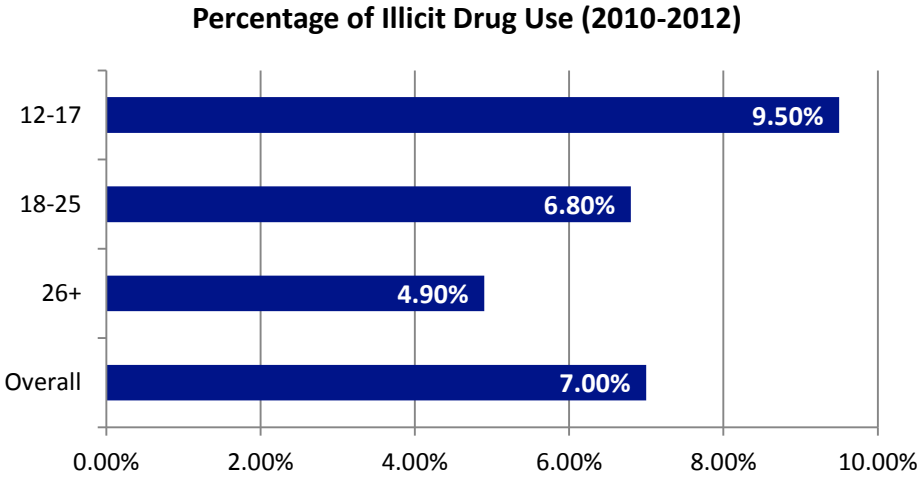


Figure 20. Illicit Drug Use in Montgomery County
(Source: Healthy Montgomery, 2010-2012)

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.[14] As of 2014, 25.2 percent of the population reported tobacco use while 20.8 percent reported cigarette use.

[13] 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 21). [15] This decrease has helped the County meet the SHIP 2017 target of 15.20 percent adolescent tobacco smokers.

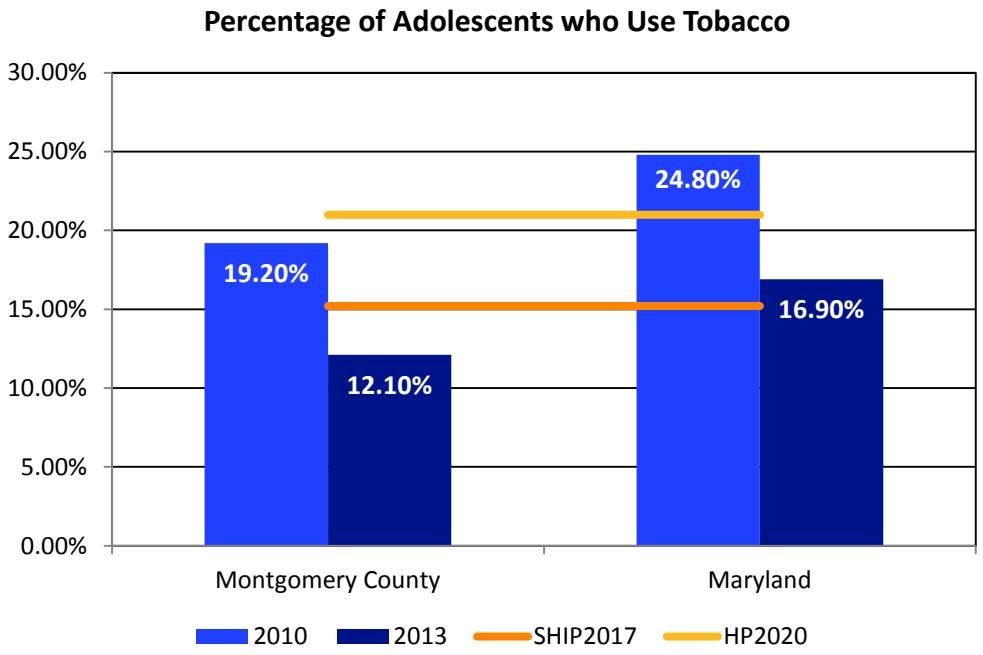


Figure 21. Adolescents Using Tobacco in Montgomery County and Maryland
(Source: Healthy Montgomery and PGC Health Zone, 2013)

Adult smokers comprise 7.90 percent of Montgomery County (Figure 22). Overall, the county still meets 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 do not meet the Healthy People 2020 target; however, all groups meet the SHIP target.

[14] 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/
[15] 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

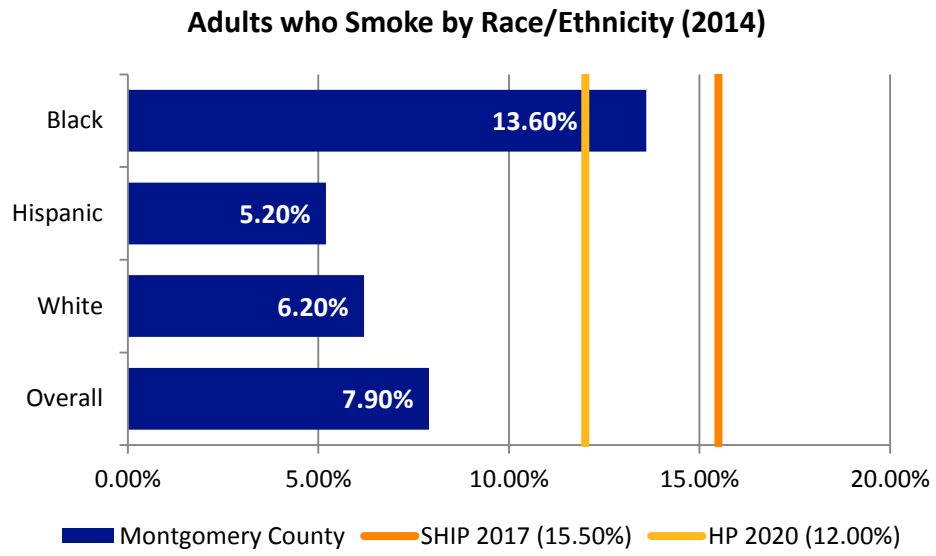


Figure 22. Adults who Smoke by Race/Ethnicity
(Source: Healthy Montgomery, 2014)

Most of the adult smokers in both counties fall into the 45–64 years age group (Figure 23). All smoking groups within Montgomery County meet the SHIP and Healthy People 2020 targets. The data also shows that males are more likely to smoke than females in the county (Figure 24).

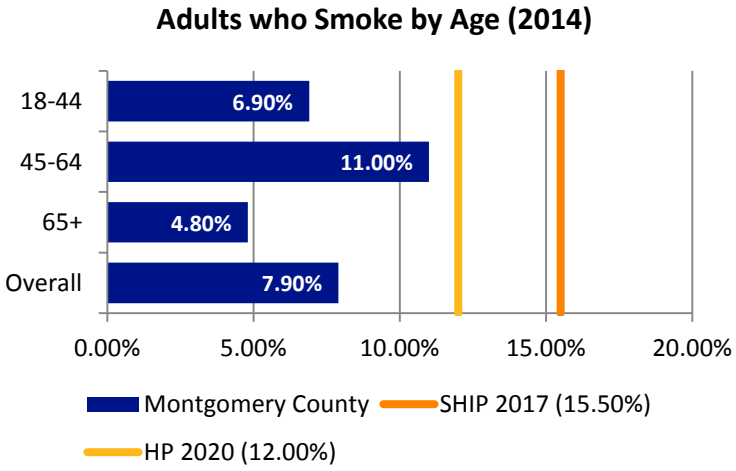


Figure 23. Adults who Smoke by Age in Montgomery County
(Source: Healthy Montgomery, 2014)

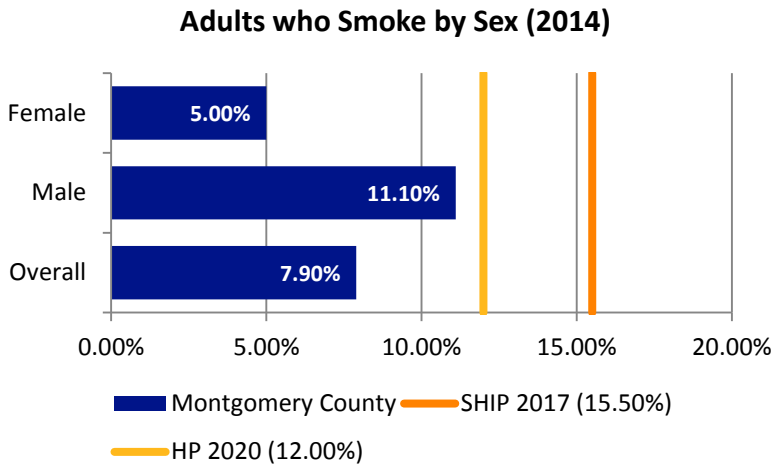


Figure 24. Adults who Smoke by Sex in Montgomery County
(Source: Healthy Montgomery, 2014)

A survey of Montgomery County residents over the age of 12 found that 5.40 percent of the population reported having smoked marijuana (Figure 25). The highest rate of marijuana use was among the 12-17 year old adolescents.

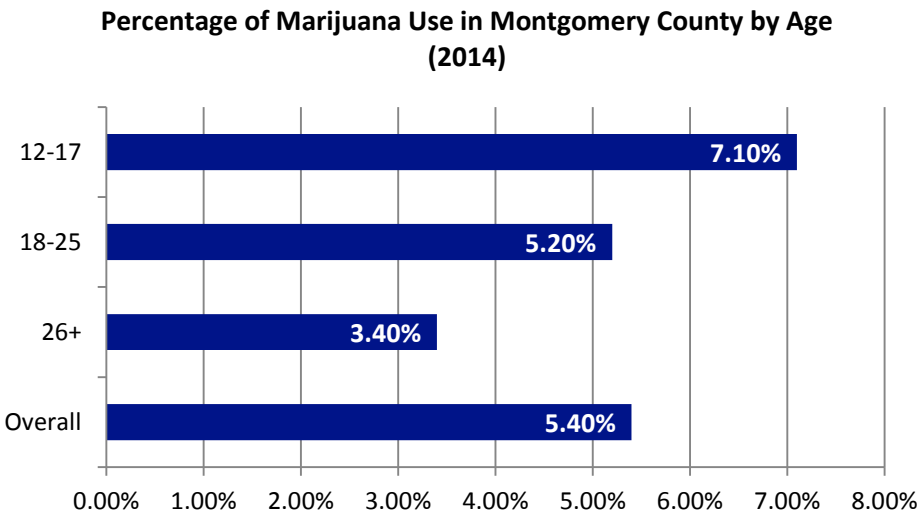


Figure 25. Marijuana Use in Montgomery County by Age, 2010-2012
(Source: Healthy Montgomery, 2010-2012)

Alcohol

Binge drinking, defined as consuming five or more drinks on a single occasion, is a concern among all age groups. Figure 26 below shows the trend of binge drinking among people aged 12–20 years across the state of Maryland.[16] According to SAMHSA, the percentage of binge drinkers for 2012–2013 is similar to the national percentage.

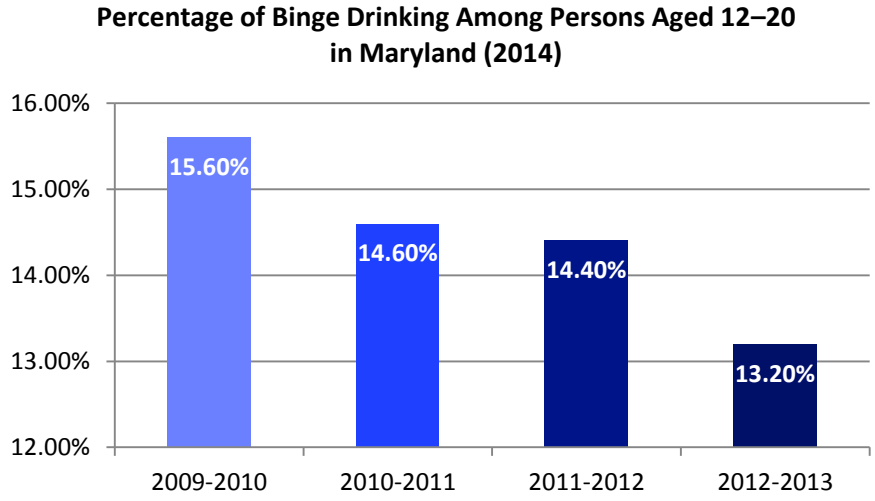


Figure 26. Binge Drinking Among Youths Aged 12-20 in Maryland, 2009 – 2013
(Source: SAMHSA Maryland Behavioral Health Barometer, 2014)

At the county level, 12.70 percent of Montgomery County residents (Figure 27) residents 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.

[16] 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

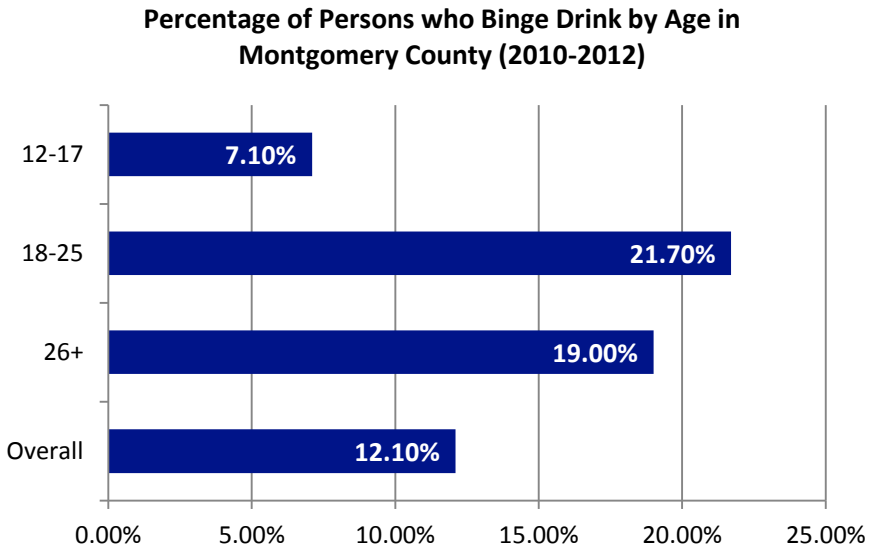


Figure 27. Persons who Binge Drink by Age in Montgomery County
(Source: Healthy Montgomery, 2010-2012)

Alcohol use is defined as having at least one drink of alcohol within the preceding month.[17] When surveyed, 58 percent of Montgomery County residents reported having consumed alcohol within the month preceding the survey (Figure 28). When broken down into age groups, the 18–25 year olds reported the highest rate of alcohol use at 67.8 percent.

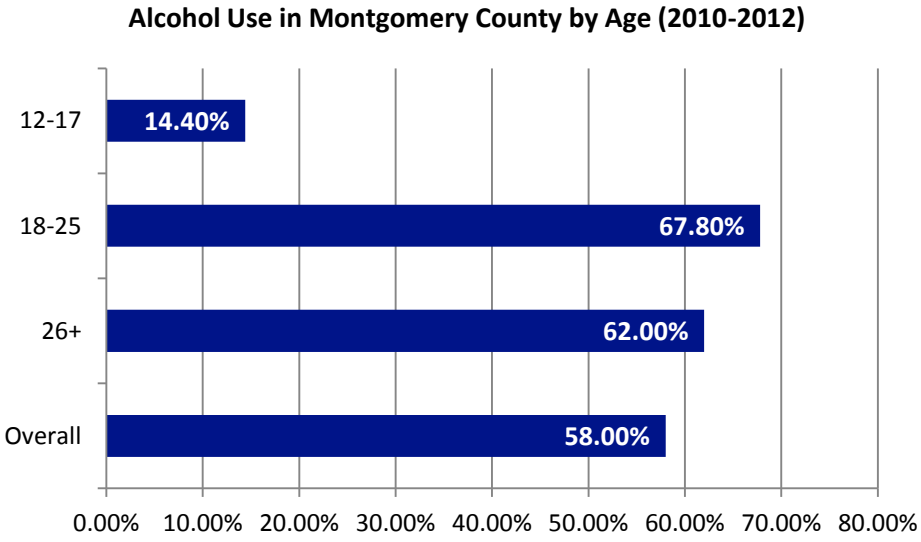


Figure 28. Alcohol Use in Montgomery County by Age
(Source: Healthy Montgomery, 2010-2012)

Montgomery County has seen a slight increase in the emergency room visit rates due to alcohol/substance abuse in the past few years, but is still far below the SHIP target of 1400.9 visits per 100,000 (Figure 29).

[17] 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

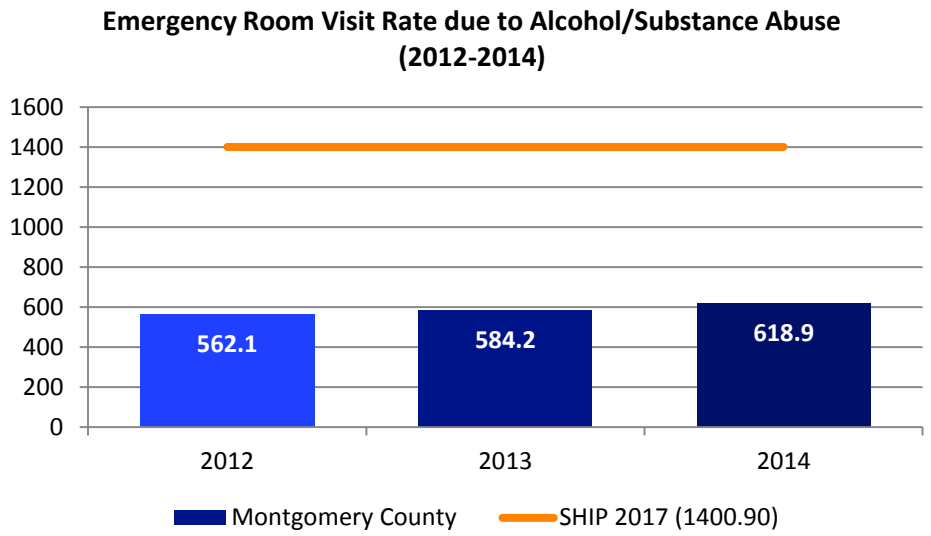


Figure 29. Emergency Room Visit Rate due to Alcohol/Substance Abuse in Montgomery County
(Source: SHIP, 2012-2014)

Although Montgomery County meets the SHIP target, emergency room utilization rates are varied among different races and ethnicities (see Figure 30). Black residents have the highest emergency room utilization rates for addictions-related conditions followed by whites.

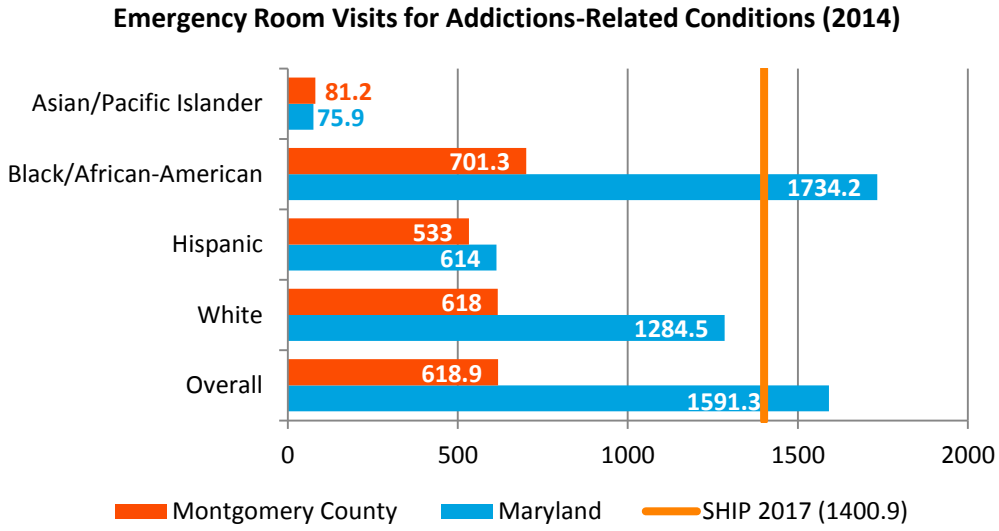


Figure 30. Emergency Room Visits for Addictions Related Conditions
(Source: SHIP, 2014)

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.[18] The majority of this population has mildly disabling mental illness (Figure 31) and falls between the ages of 26 to 49 years (Figure 32).

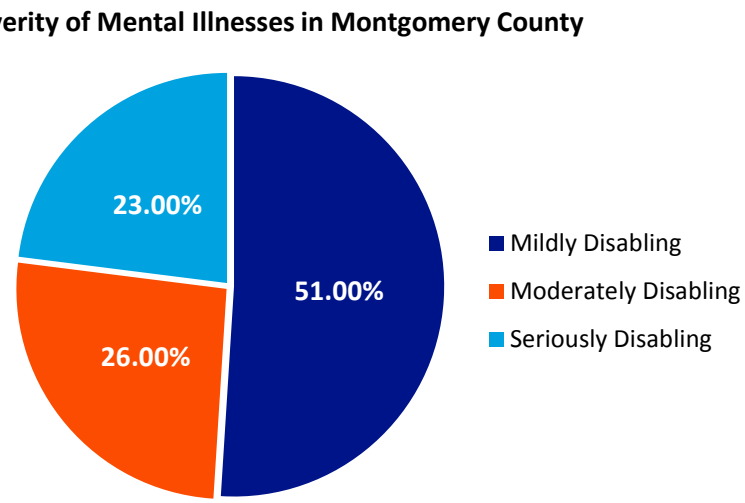


Figure 31. Severity of Mental Illnesses in Montgomery County, 2013
(Source: Behavioral Health in Montgomery County, 2013)

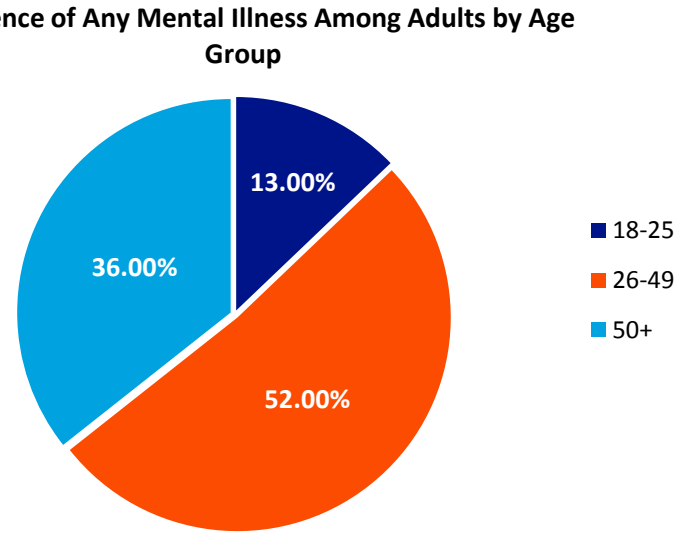


Figure 32. Prevalence of Mental Illness among Adults by Age Groups, 2013
(Source: Behavioral Health in Montgomery County, 2013)

[18] 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 33 below shows that 17.5 percent of the population reporting mental illness also experienced substance use disorder.

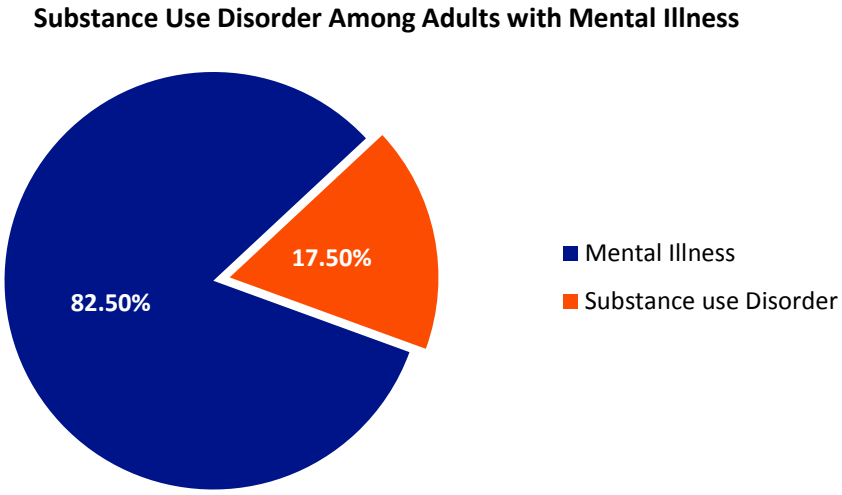


Figure 33. Substance Use Disorder Among Adults with Mental Illness, 2013
(Source: Behavioral Health in Montgomery County, 2013)

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.

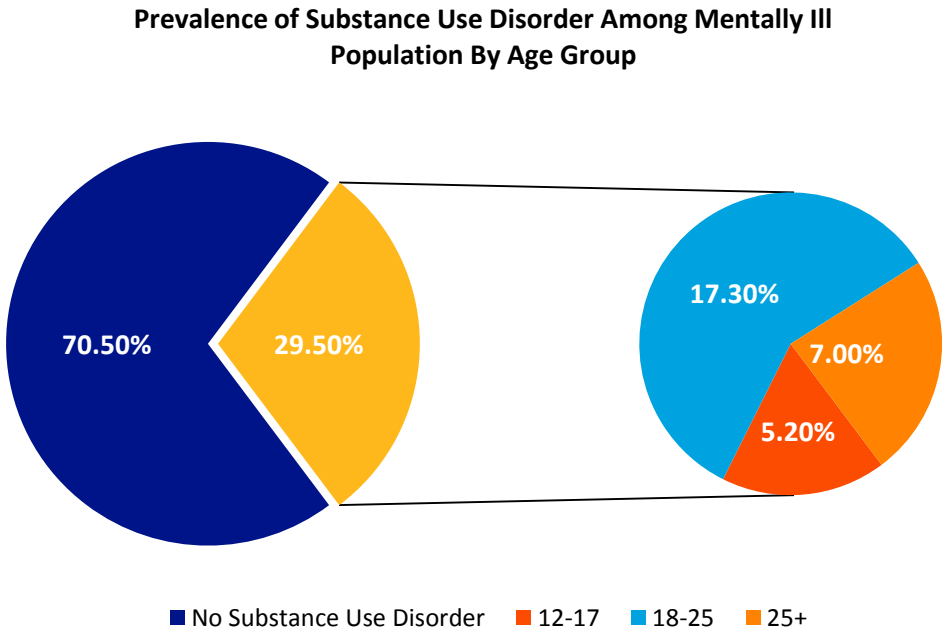


Figure 34. Prevalence of Substance Use Disorder among Mentally Ill Population by Age Group, 2013
(Source: Behavioral Health in Montgomery County, 2013)

The relationship between severity of mental illness, age, and substance dependence is further explored in Figure 35. 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.

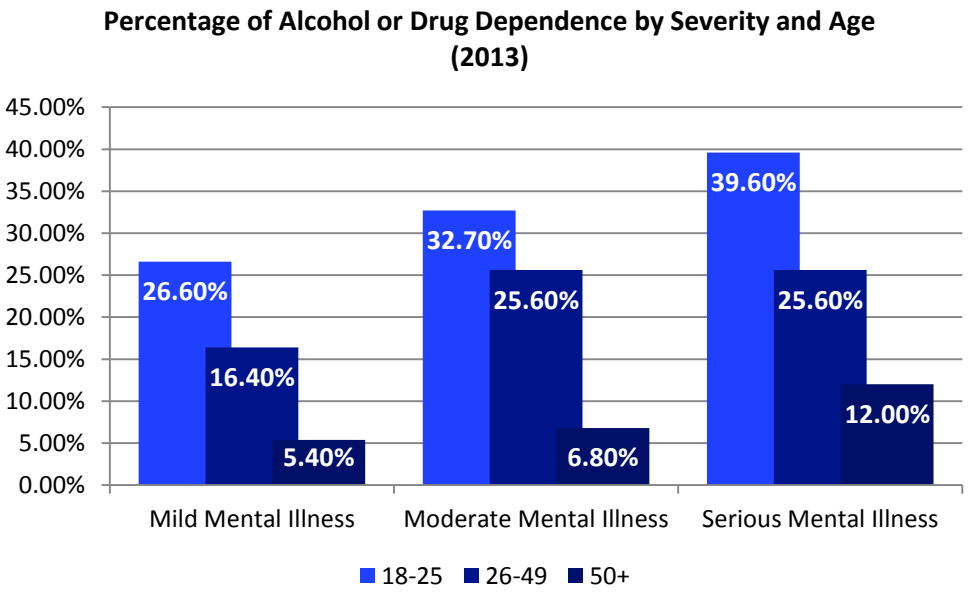


Figure 35. Alcohol and Drug Dependence by Severity of Mental Illness and Age
(Source: Behavioral Health in Montgomery County, 2013)

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 36 below shows the rates of alcohol and drug abuse versus dependence among the general population.

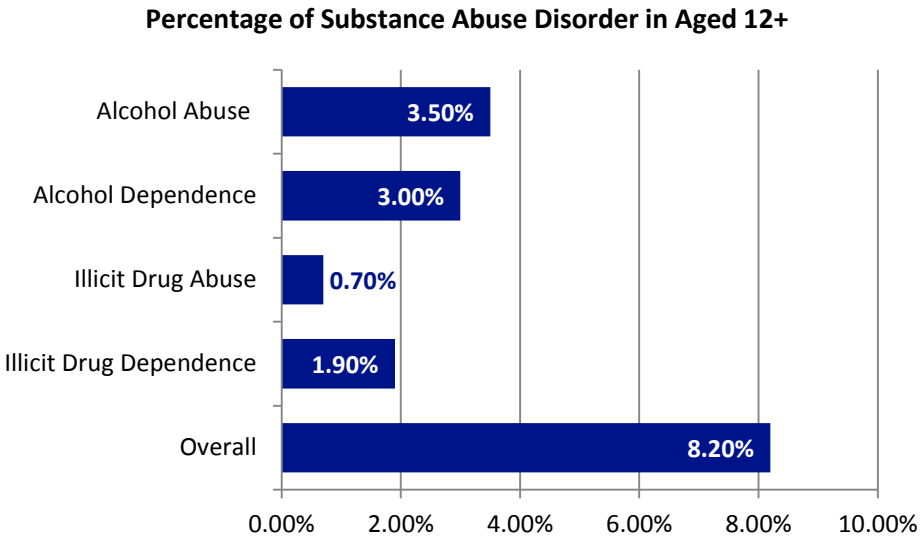


Figure 36. Substance Use Disorder among General Population Aged 12 and Over in Montgomery County
(Source: Behavioral Health in Montgomery County, 2013)

Community Resources

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 and Wellness Services, MedStar Montgomery, Suburban Hospital, and Washington Adventist Hospital. These providers offer outpatient care as well. In addition to private health care providers, there is an array of behavioral health services:

- Montgomery County Crisis Center: 24 hour telephone or walk-in services; services for children and adolescents
- Reginald S. Lourie Center for Infants and Young Children
- Children's National Medical Center: partial hospitalization programs
- Psychiatric Rehabilitation Programs for Children
- Affiliated Community Counselors, Inc. provides individual counseling on a sliding scale
- Anxiety and Depression Association of America provides education and advocacy
- Access Team provides assistance to access behavioral health services and substance abuse services; Spanish language services are available
- City of Rockville Youth and Family Services provides short-term counseling for youth and families
- Community Connections provides assessment, residential needs, and support
- The Mental Health Association provides advocacy, support, and education
- National Alliance on Mental Illness (NAMI) provides family support and patient support, advocacy, resources for military, legal support, and education
- Montgomery County Department of Health and Human Services offers an Adult Mental Health Program for outpatient mental health patients. This program offers services such as individual and group psychotherapy, office case management and medication monitoring for low-income Montgomery County residents.
- Cornerstone Montgomery is a non-profit organization which provides mental health and substance abuse disorder treatments and interventions. A few of their programs include a residential program, a support living program, a back to work program, as well as community rehabilitation and counseling services.

Section IV: Findings

Part B:
Secondary Data Findings

Chapter 7: Asthma

Asthma

KEY FINDINGS

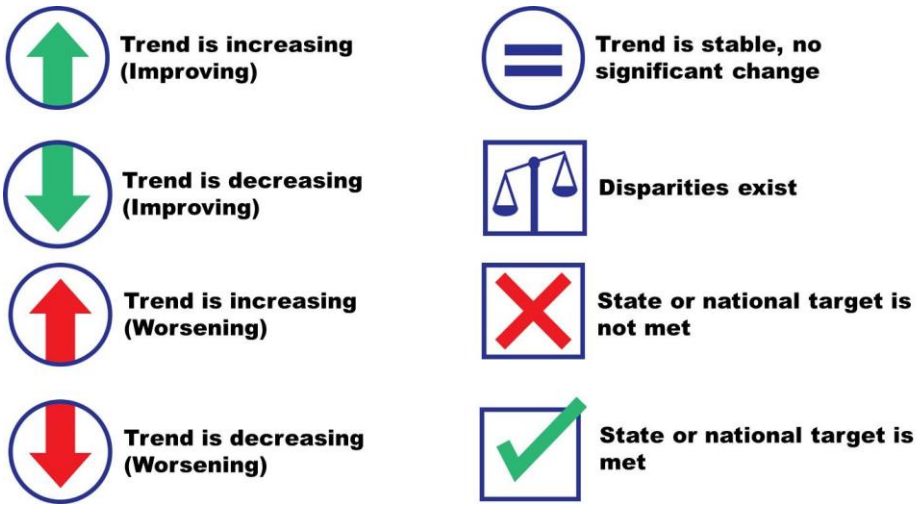
- Nationally, the prevalence of asthma is higher in children compared to adults, and higher in Black residents compared to other racial groups, and individuals who fall below 100 percent of the poverty level.

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

- Blacks in Montgomery County have the highest rates of asthma compared to other racial groups, while Hispanics have the lowest rates of asthma. There is a higher prevalence of asthma among females compared to males in the county.

- Emergency room visit rates due to asthma have been on a downward trend in Montgomery County from 2012 to 2014.

- Montgomery County meets the SHIP 2017 target for emergency room visits 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 13.8 percent and 13.5 percent (Figure 1).

Prevalence

Following a similar trend to that of Maryland, the prevalence of asthma among adults in Montgomery County has fluctuated from 2011 to 2014, most recently showing a decrease from 2013 to 2014. At 9.8 percent, Montgomery County has a lower prevalence compared to that of 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

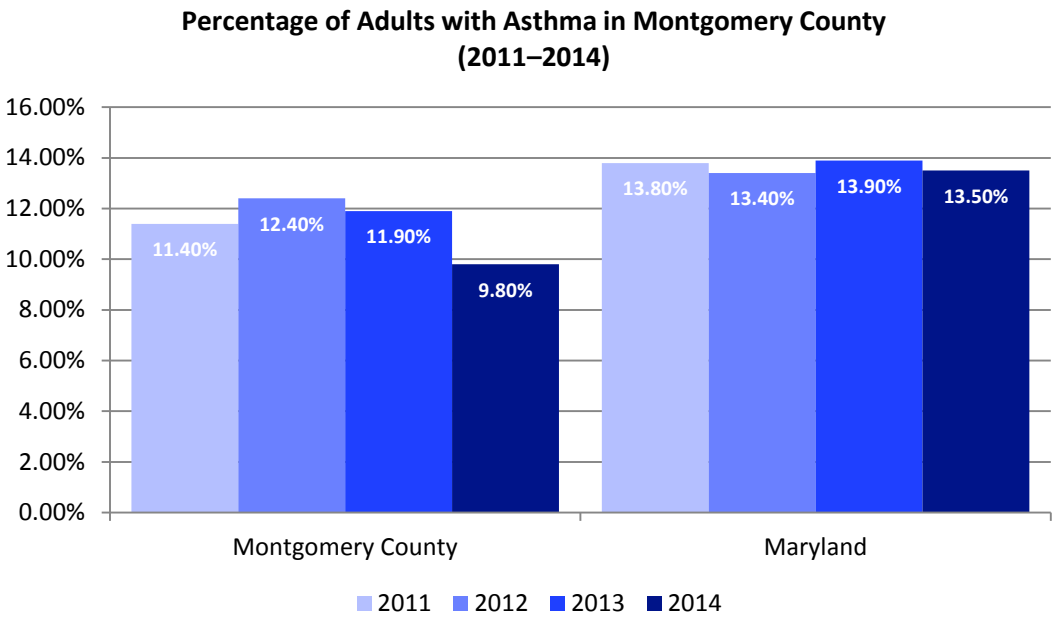


Figure 1. Percentage of adults who have ever been told by a healthcare provider that they have asthma in Montgomery County and Maryland, 2011–2014.

(Sources: Healthy Montgomery, PGC Health Zone, & Maryland Behavioral Risk Factor Surveillance System (BRFSS))

In Montgomery County, disparities in asthma prevalence can be seen across different age, sex, race, and ethnic groups. Asthma prevalence rates among females in Montgomery County are 11.0 percent compared to 8.6 percent among males (Figure 2).

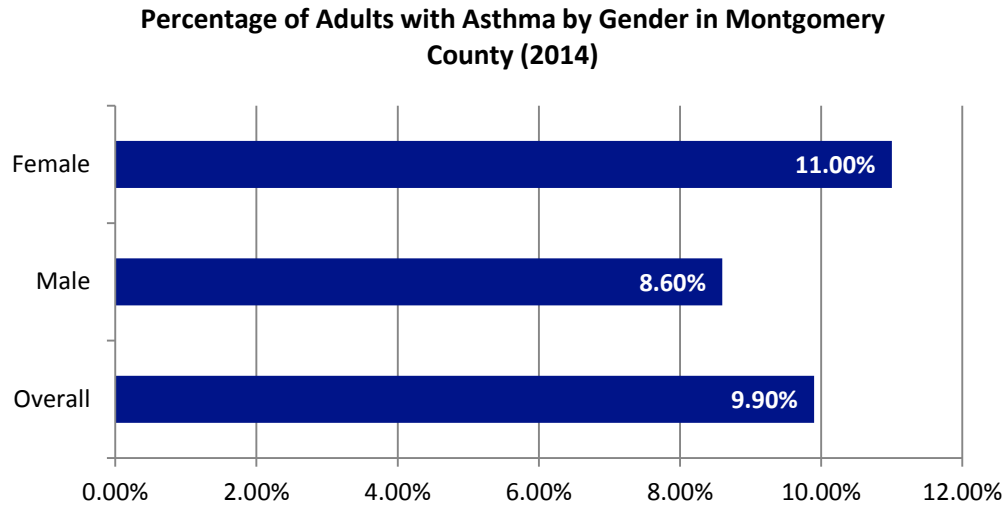


Figure 2. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Sex in Montgomery County, 2014

(Sources: Healthy Montgomery, 2014)

When broken down by age, Montgomery County has significantly high asthma rates among 18-44 year olds followed by individuals 65 and over (Figure 3).

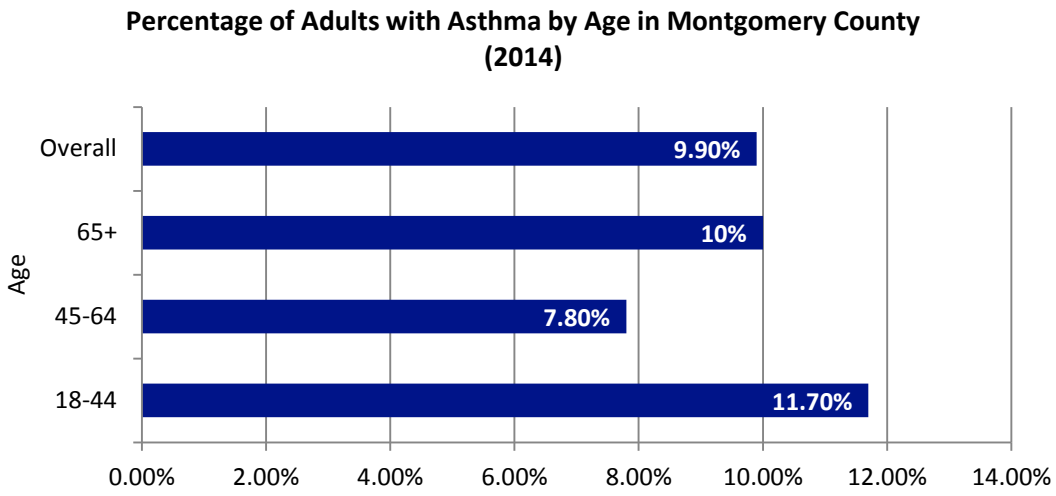


Figure 3. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Age in Montgomery County, 2014

(Sources: Healthy Montgomery, 2014)

Broken down by race and ethnicity, 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 4).

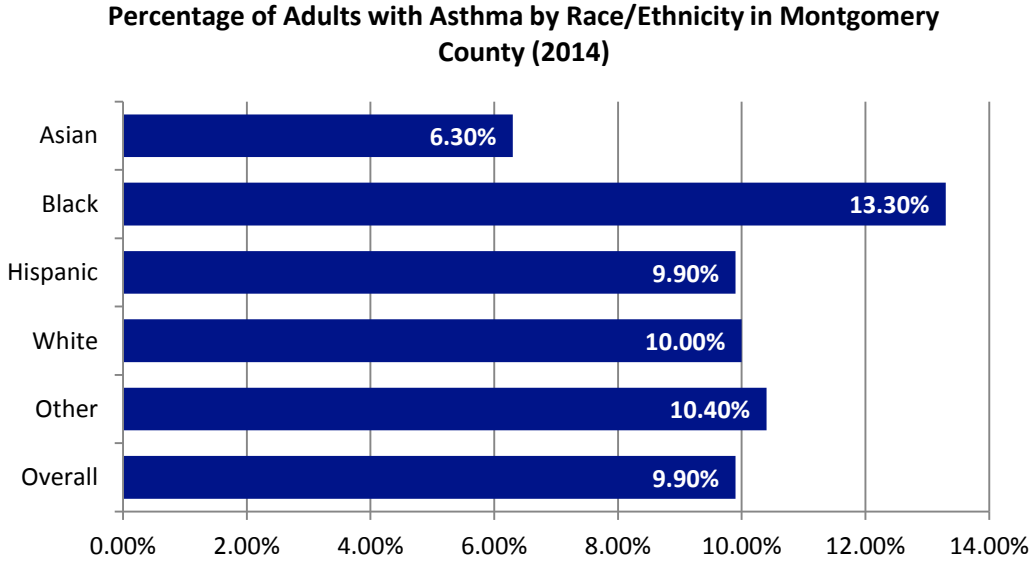


Figure 4. Percentage of adults who have ever been told by a healthcare provider that they have asthma by Race/Ethnicity in Montgomery County, 2014

(Sources: Healthy Montgomery, 2014)

Emergency Room Use

Emergency room visit rates due to asthma have been on a downward trend in Montgomery County and Maryland from 2012 to 2014 (Figure 5). With rates lower than that of the state, Montgomery County has 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, has not. Despite Montgomery County having met the SHIP target, it is important to note that emergency room visit rates due to asthma in Maryland (68.3 per 10,000 population) are substantially higher than those in Montgomery County (36.3 per 10,000 population).

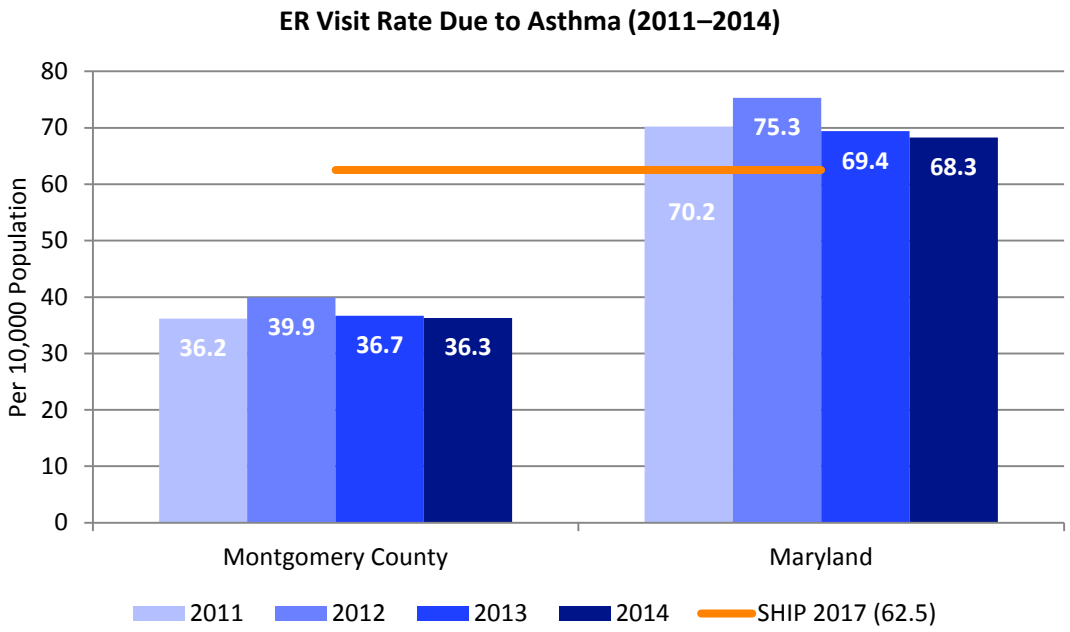


Figure 5. Emergency Room Visit Rate due to Asthma per 10,000 Population in Montgomery County and Maryland, 2011–2014. (Sources: Healthy Montgomery, 2014)

Medicare Population

There has been a slight increase in the percentage of Medicare beneficiaries treated for asthma across Montgomery Count and Maryland (Figure 6). In comparison to the state, Montgomery County has less percentage of Medicare beneficiaries being treated for asthma.

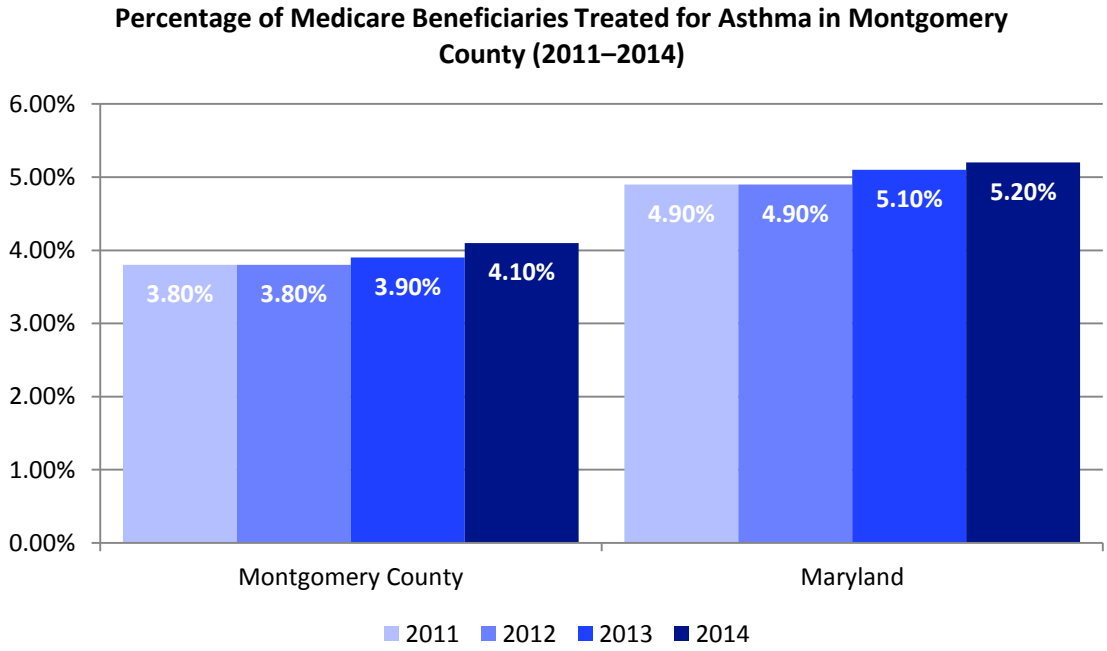


Figure 6. Percentage of Medicare Beneficiaries who were Treated for Asthma in Montgomery County and Maryland, 2011–2014. (Sources: Healthy Montgomery, 2014)

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:

- 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.

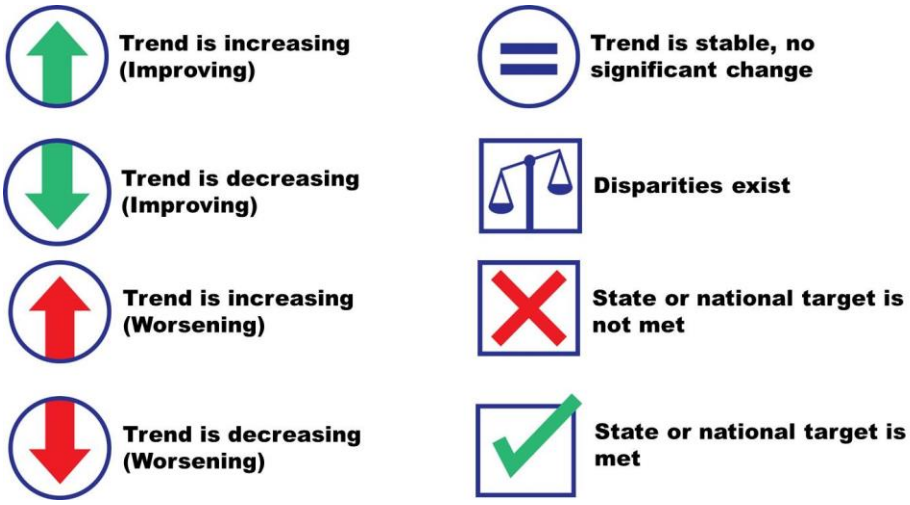
- Blacks across the state of Maryland have higher mortality rates due to influenza and its complications than whites.

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

- Montgomery County does not meet the Healthy People 2020 or SHIP 2017 targets for vaccination rates.

- Whites in Montgomery 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.

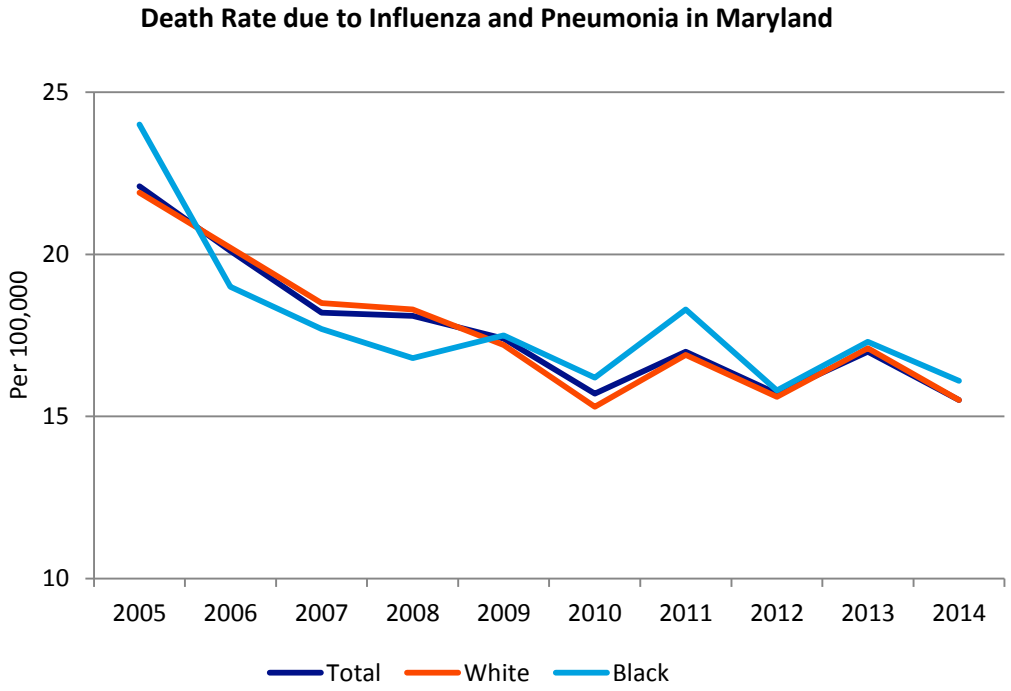


Figure 1. Death Rate due to Influenza and Pneumonia in Maryland, 2005-2014
(Source: Maryland Department of Health and Mental Hygiene (DHMH), 2014)

At the county level, the death rate due to influenza and complications from pneumonia is lower in Montgomery County (12.9 per 100,000) than in Maryland (16 per 100,000) (Figure 2).

[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

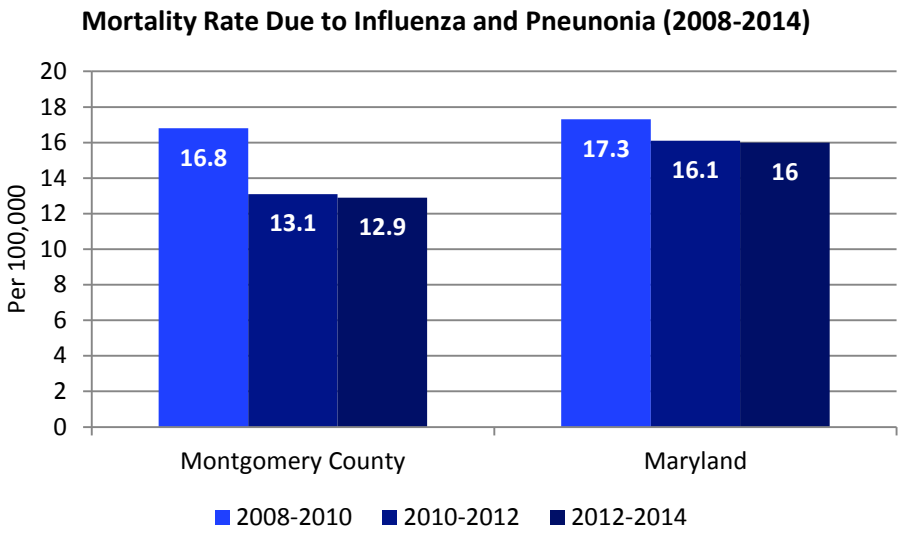


Figure 2. Mortality Rates due to Influenza and Pneumonia in Montgomery County and Maryland (Sources: Healthy Montgomery & PGC Health Zone, 2014)

Incidence/Prevalence

The 2014–2015 influenza season was more severe than recent flu seasons.[3] 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). Maryland has higher vaccination rates than Montgomery County. 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 in any group other except whites (Figure 4).

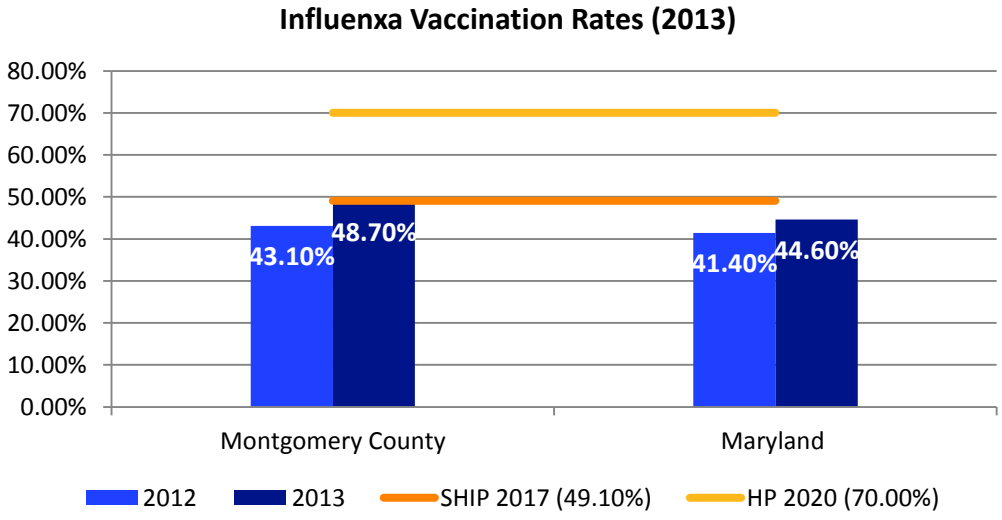


Figure 3. Vaccination Rates in Montgomery County and Maryland, 2012-2013 (Source: DHMH - State Health Improvement Process (SHIP), 2013)

[3] 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

In 2014, 62.6 percent of seniors aged 65 and over in Montgomery County and 62.1 percent of Maryland seniors were vaccinated against the flu (Figure 4). They 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.

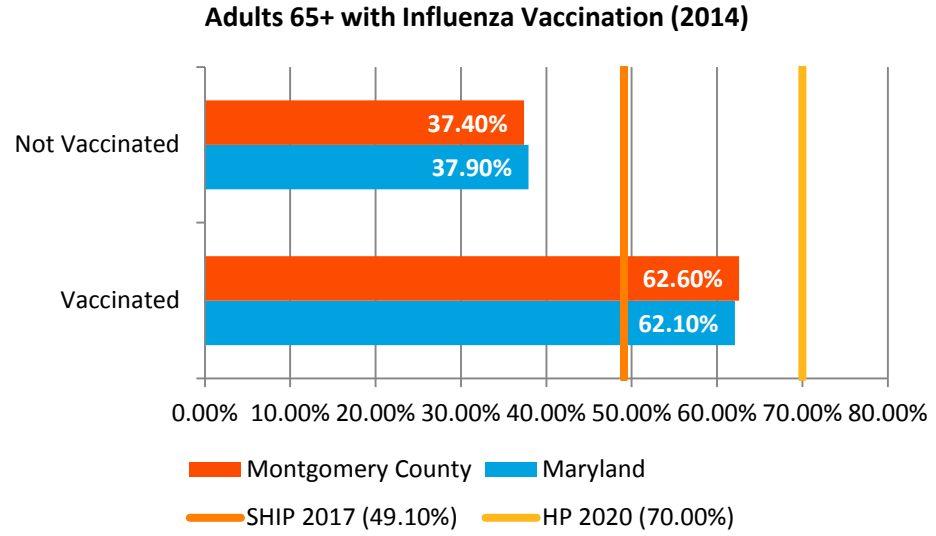


Figure 4. Percentage of Vaccinations among Seniors in Montgomery County and Maryland, 2014
(Sources: Healthy Montgomery, PGC Health Zone, 2014)

Across Montgomery County the state, whites are the most vaccinated population (Figure 5). Blacks were vaccinated at similar rates across the county and the state. Specifically looking at the white population, those in Montgomery County were vaccinated at a much higher rate than those in Maryland. Nevertheless, no groups in Montgomery County or Maryland met the Healthy People 2020 target.

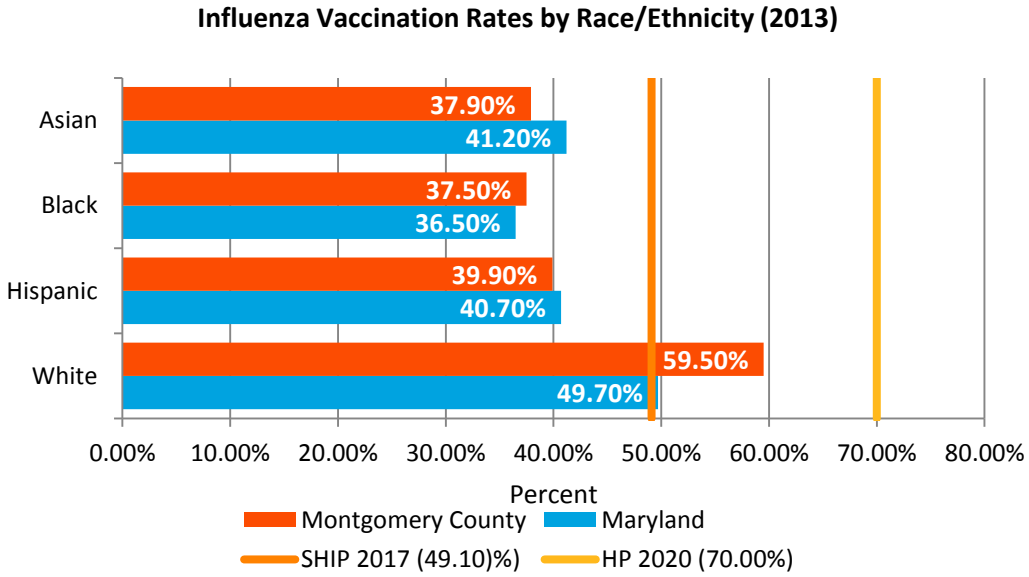


Figure 5. Influenza Vaccination Rates in Montgomery County and Maryland by Race and Ethnicity, 2013
(Source: DHMH - SHIP, 2013)

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.

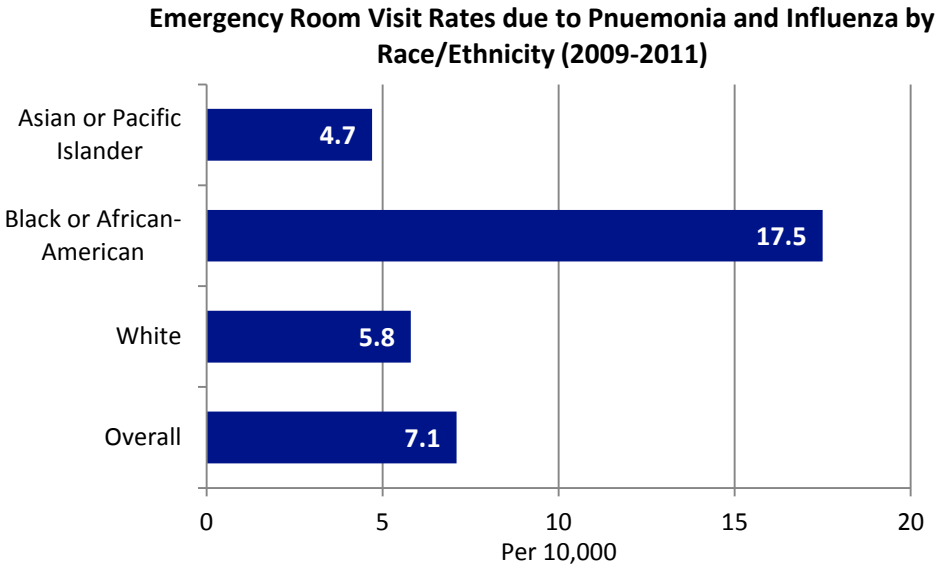


Figure 6. Emergency Room Visit Rates due to Pneumonia and Influenza in Montgomery County by Race/Ethnicity
(Sources: Healthy Montgomery. 2009-2011)

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.

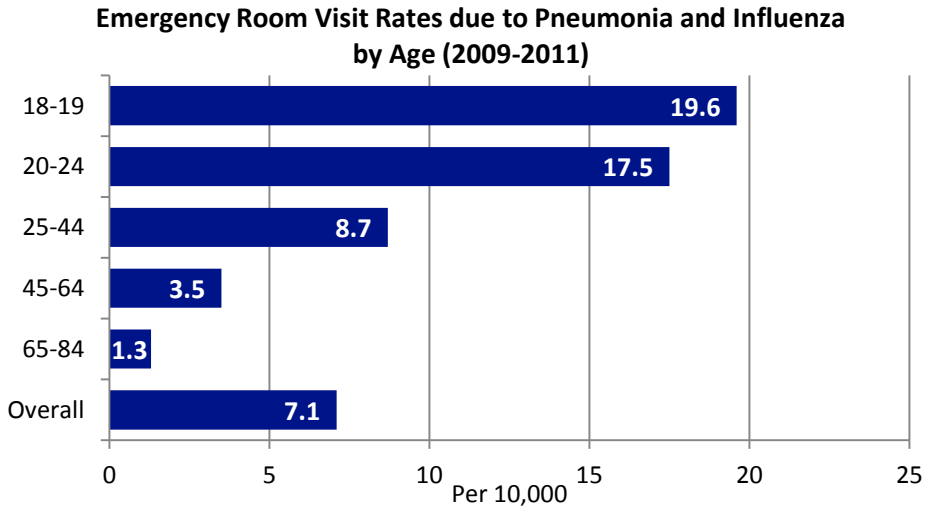


Figure 7. Emergency Room Visit Rates due to Pneumonia and Influenza in Montgomery County by Age
(Sources: Healthy Montgomery. 2009-2011)

Community Resources

Immunization against the influenza is widely available in Shady Grove Medical Center's Community Benefit Service Area:

- Shady Grove Medical Center 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 at community centers, congregations, subsidized apartment complexes, and at Shady Grove Medical Center.
- Other health care providers, physician offices, local pharmacies, WIC providers, schools, child care providers, and clinics also provide flu vaccinations and education/outreach.
- 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

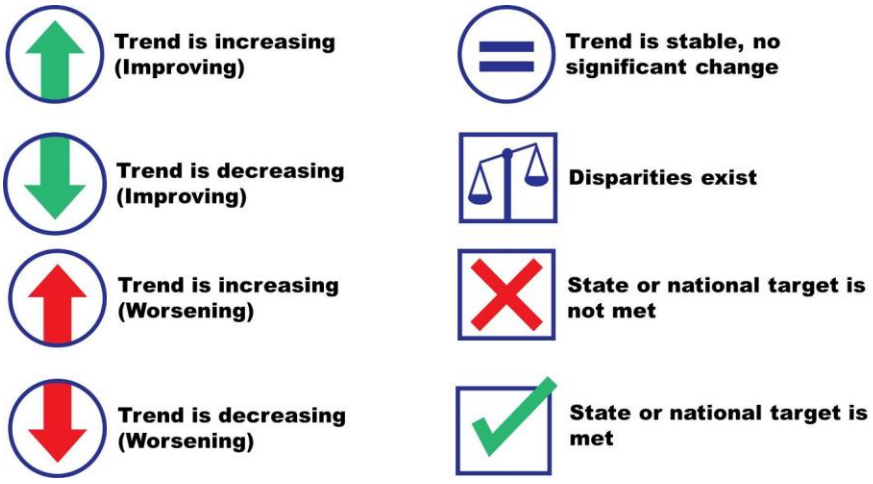
Part B:
Secondary Data Findings

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.
- 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)

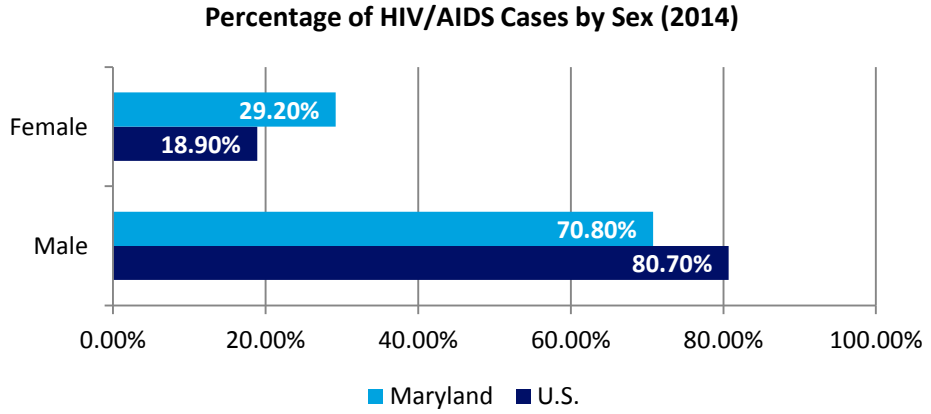


Figure 1. Percentage of HIV/AIDS cases in Maryland and the U.S. by Sex, 2014
(Source: Maryland HIV Progress Report, June 2016)

[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).

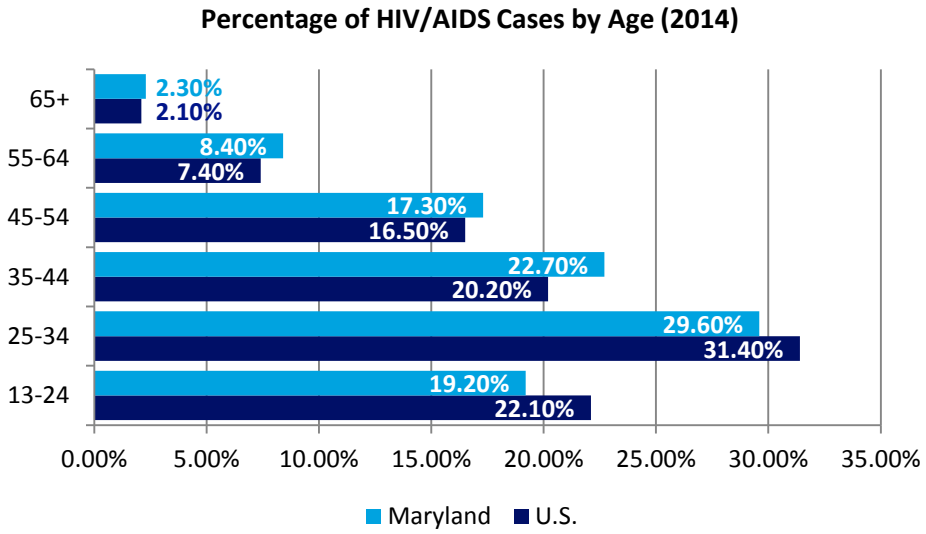


Figure 2. Percentage of HIV/AIDS Cases in Maryland and the U.S. by Age, 2014
(Source: Maryland HIV Progress Report, June 2016)

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.

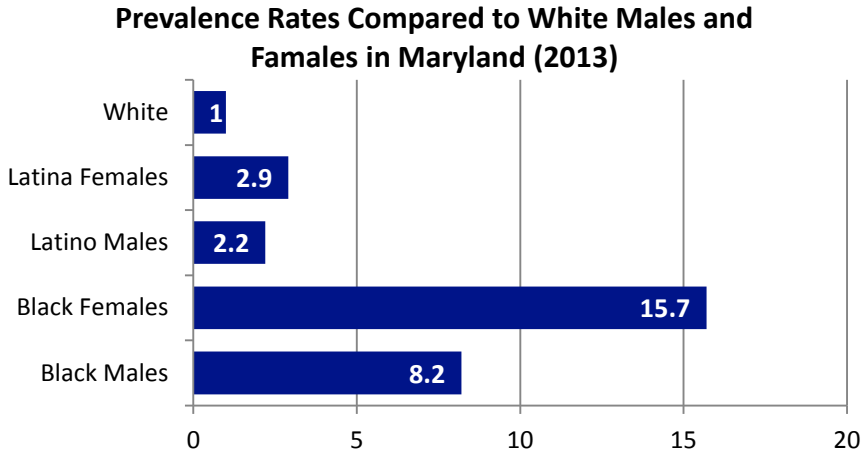


Figure 3. HIV/AIDS Prevalence Rates Compared to White Males and Females in Maryland, 2013
(Source: AIDSVu, Maryland, 2013)

[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

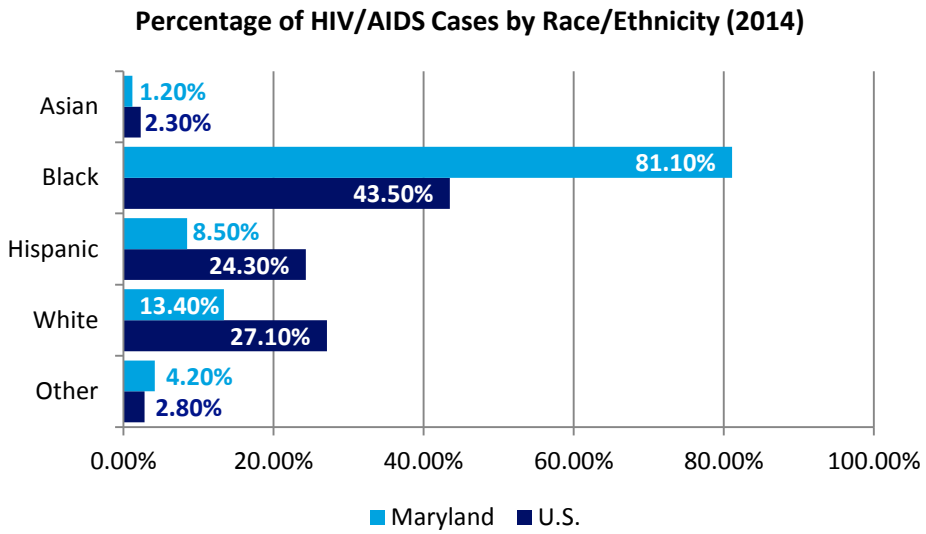


Figure 4. HIV/AIDS Data by Race and Ethnicity, 2014
(Source: Maryland HIV Progress Report, June 2016)

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).

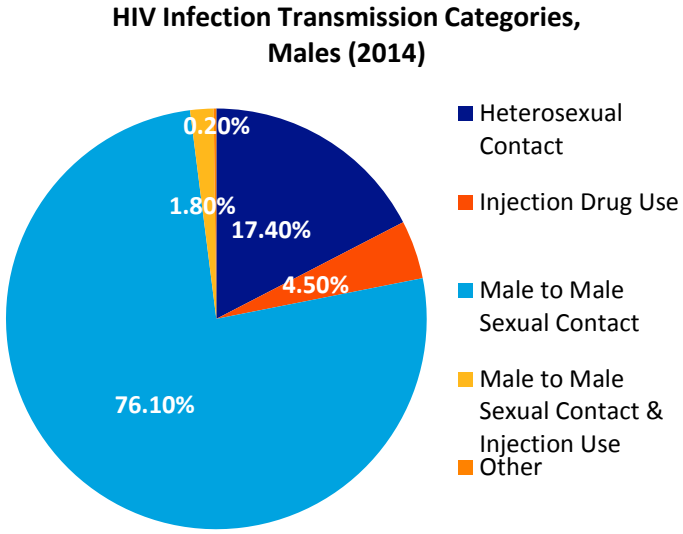


Figure 5. HIV Infection Transmission Categories for Males Living in Maryland, 2014
(Source: AIDSVu, Maryland, 2013)

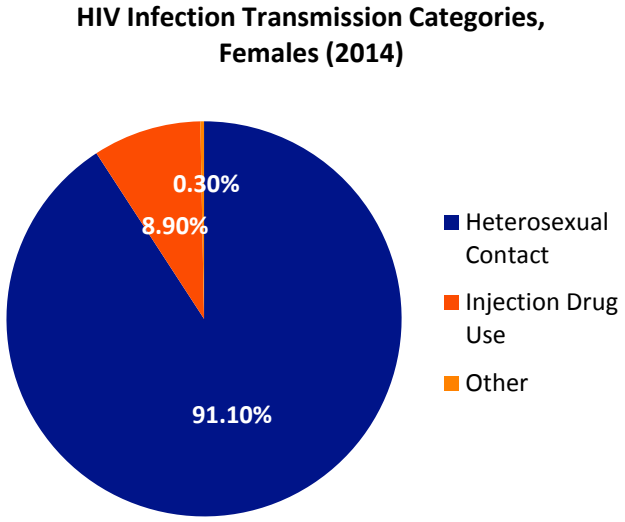


Figure 6. HIV Infection Transmission Categories for Females Living in Maryland, 2014
(Source: AIDSVu, Maryland, 2013)

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).

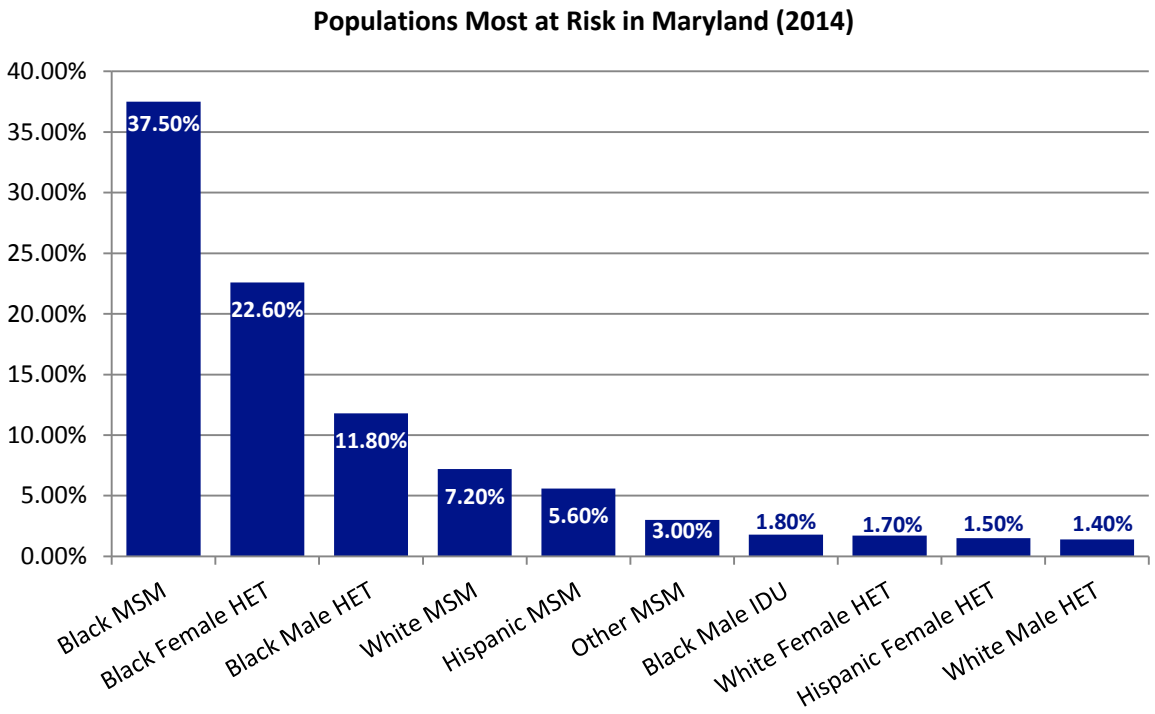


Figure 7. Populations Most at Risk for HIV/AIDS in Maryland, 2014
(Source: Maryland HIV Progress Report, June 2016)
(Note: MSM = men who have sex with men, HET = heterosexual exposure, IDU = injection drug user)

HIV/AIDS at County Level

Compared to the state overall, Montgomery County has a higher rate of adolescents over the age of 13 years and adults diagnosed with HIV 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. 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 Maryland overall, where Black residents have the highest HIV incidence rates at 61 per 100,000. It is worth noting Hispanics in Maryland have a higher HIV incidence rate than Hispanics in Montgomery County (Figure 8).

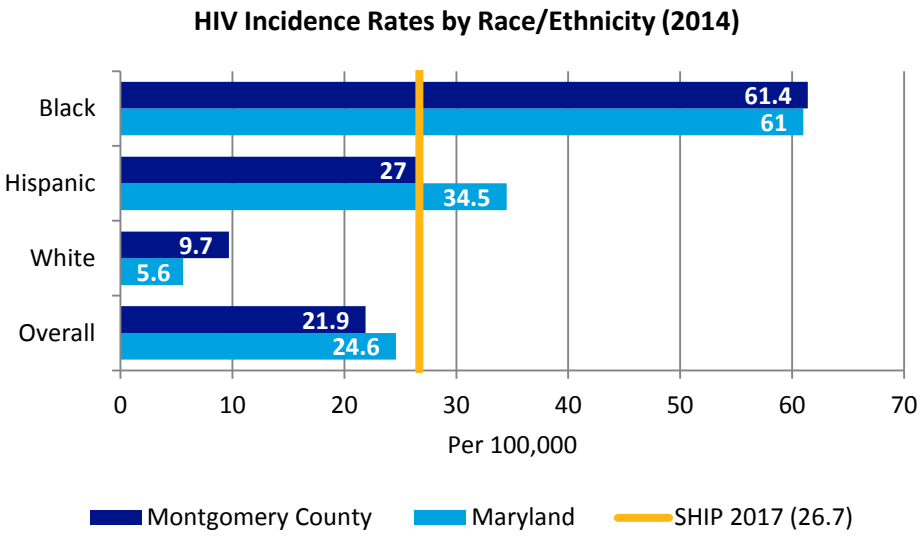


Figure 8. HIV Incidence Rates in Montgomery County, 2014
(Source: Maryland SHIP Measures)

At the end of 2013, the rate of people living with HIV diagnosis was higher in Montgomery County than Maryland (Figure 9). Whereas 462 people per 100,000 were living with HIV diagnosis in Montgomery County, the rate was much higher at 641 per 100,000 people in Maryland.

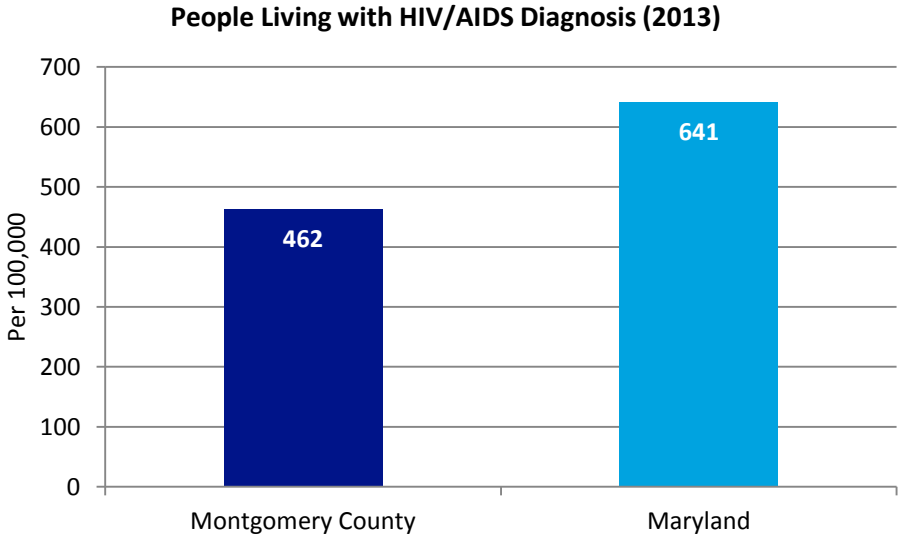


Figure 9. The Rate of People Living with HIV Diagnosis in Montgomery County and Maryland, 2013
(Source: AIDSVu, Maryland, 2013)

The number of Black people living with HIV at the end of 2013 was 2,398 in Montgomery County and 23,880 in Maryland (Figure 10). Montgomery County had the highest number of HIV cases among residents aged 35–44 while Maryland had the highest number of HIV cases among residents aged 45-54 years old (Figure 11). Males constituted most of the population affected by HIV, in both Montgomery and Maryland (Figure 12). In the year 2014, 227 Montgomery County and 1,388 Maryland residents were newly diagnosed with HIV.

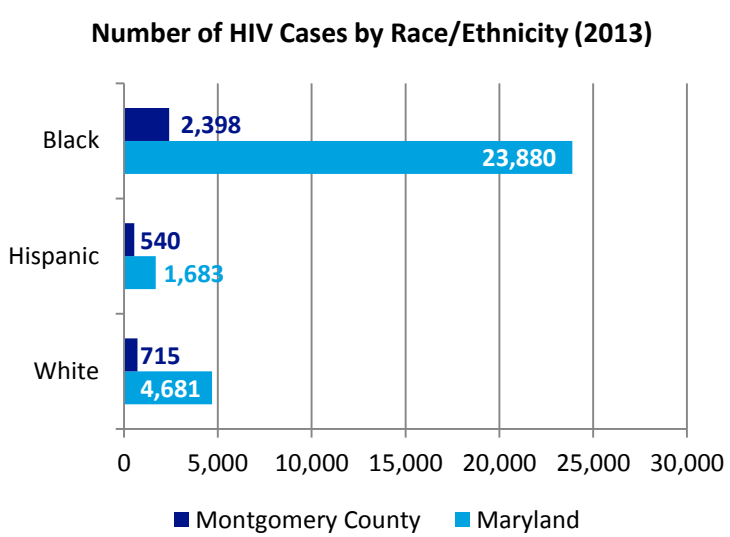


Figure 10. Number of People Living with HIV by Race/Ethnicity in Montgomery County and Maryland, 2013
(Source: AIDSVu, Maryland, 2013)

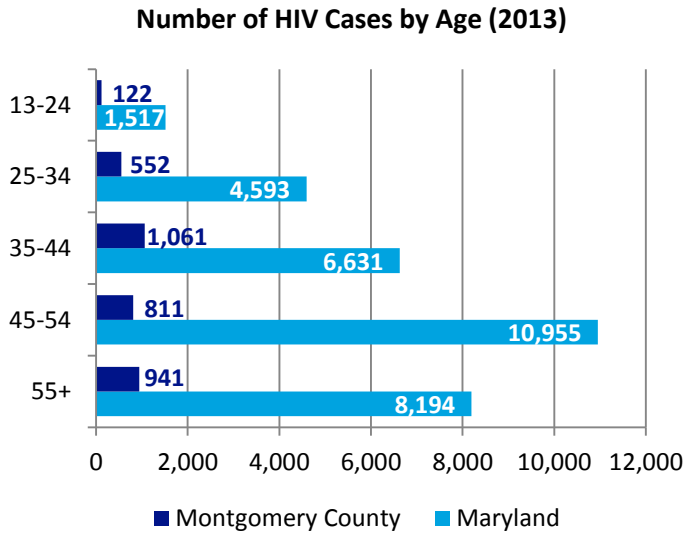


Figure 11. Number of People Living with HIV by Age in Montgomery County and Maryland, 2013
(Source: AIDSVu, Maryland, 2013)

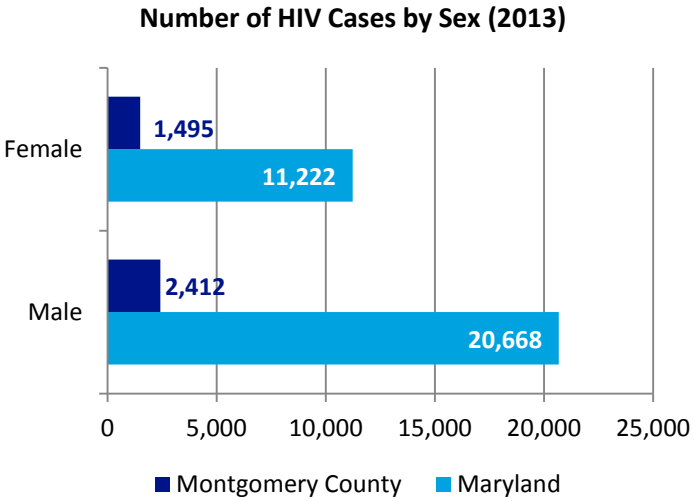


Figure 12. Number of People Living with HIV by Sex in Montgomery County and Maryland, 2013
(Source: AIDSVu, Maryland, 2013)

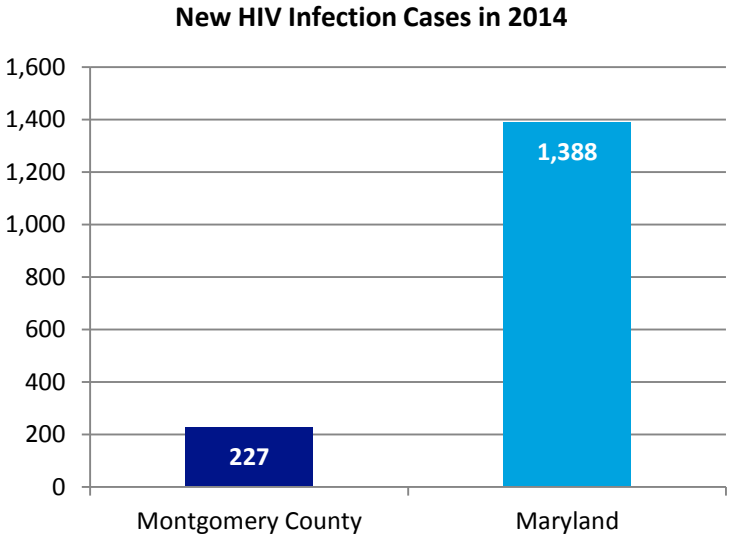


Figure 13. New HIV Infection Diagnoses in 2014 in Montgomery County and Maryland
(Source: AIDSVu, Maryland, 2013)

Community Resources

Treatment and support for those with HIV or AIDS is provided by both private and public health care providers. The safety net clinics serving Montgomery County provide diagnostic services and treatment. Other local services include:

- HIV Care and Case Management from the Montgomery County Health Department helps to provide dental care, counseling, support groups, and home care services as needed. Education and outreach to at-risk populations is also provided.
- Montgomery County Health Department provides clinical services, lab tests, and diagnostic evaluations.
- Maryland AIDS Administration educates public and health care professionals.
- Maryland AIDS Drug Assistance Program (MADAP) is a statewide program provided by The Maryland Department of Health and Mental Hygiene which ensures that people living with HIV/AIDS in the state of Maryland have access to medication needed for them to stay healthy.
- "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

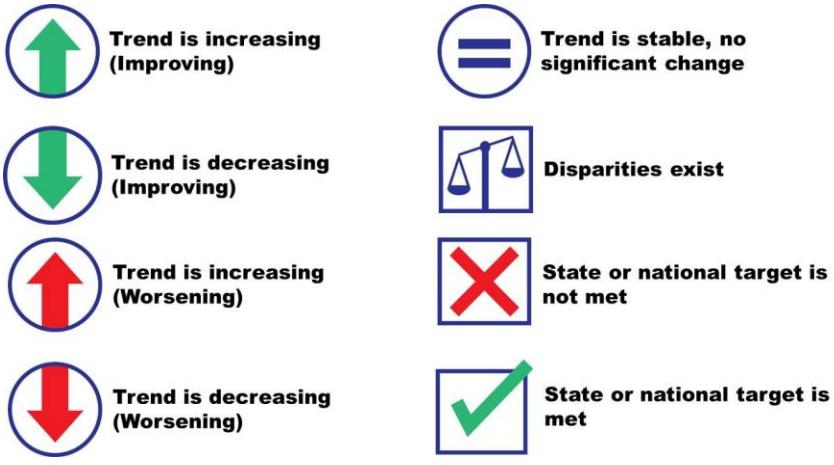
Part B:
Secondary Data Findings

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 lowest 4-year high school graduation rates are among 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 and Maryland.
- Hispanic children are the least ready to learn when entering kindergarten in Montgomery County.
- Hispanics are the least likely to consume five or more servings of fruits and vegetables in Montgomery County.
- Montgomery County, at 7 percent, has a lower percentage of people living in food deserts than Maryland (12.7 percent).
- There are 981 people experiencing homelessness in Montgomery 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 Montgomery County (1.4 per 100,000) or Maryland (0.9 per 100,000).
- Whites in Montgomery 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]

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. Similar patterns can be found when looking at the graduation rates across the state of Maryland (Figure 1).

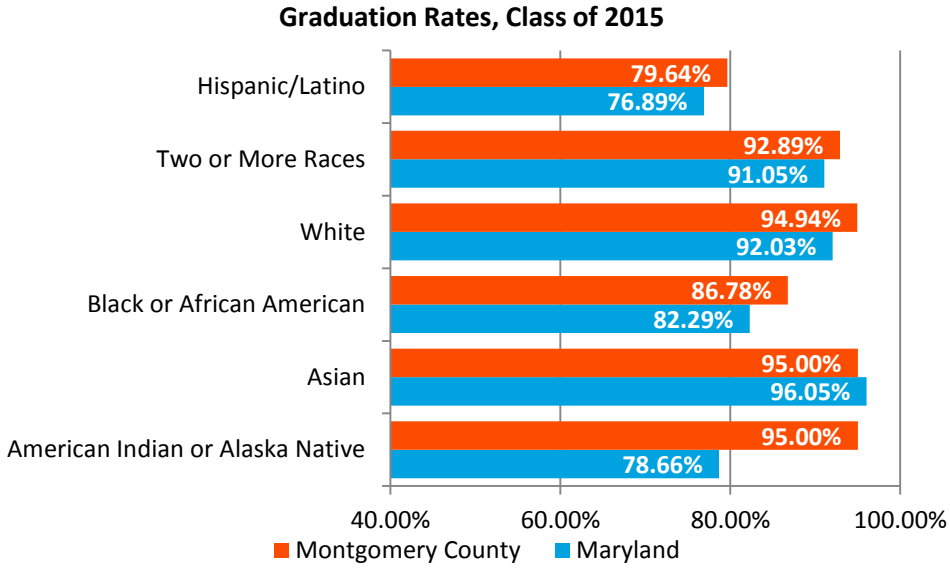


Figure 1. High School Graduation Rates by Race and Ethnicity
(Source: Maryland Report Card, 2016)

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). 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

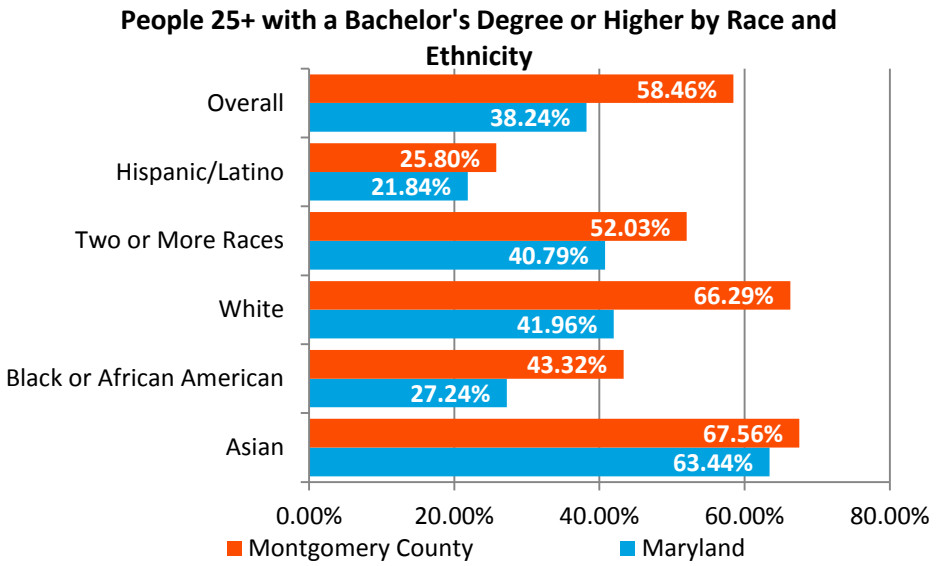


Figure 2. People 25 and over with a Bachelor's Degree or Higher by Race and Ethnicity
(Source: U.S. Census Bureau-American Community Survey, 2014 1-Year ACS Estimates)

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 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).

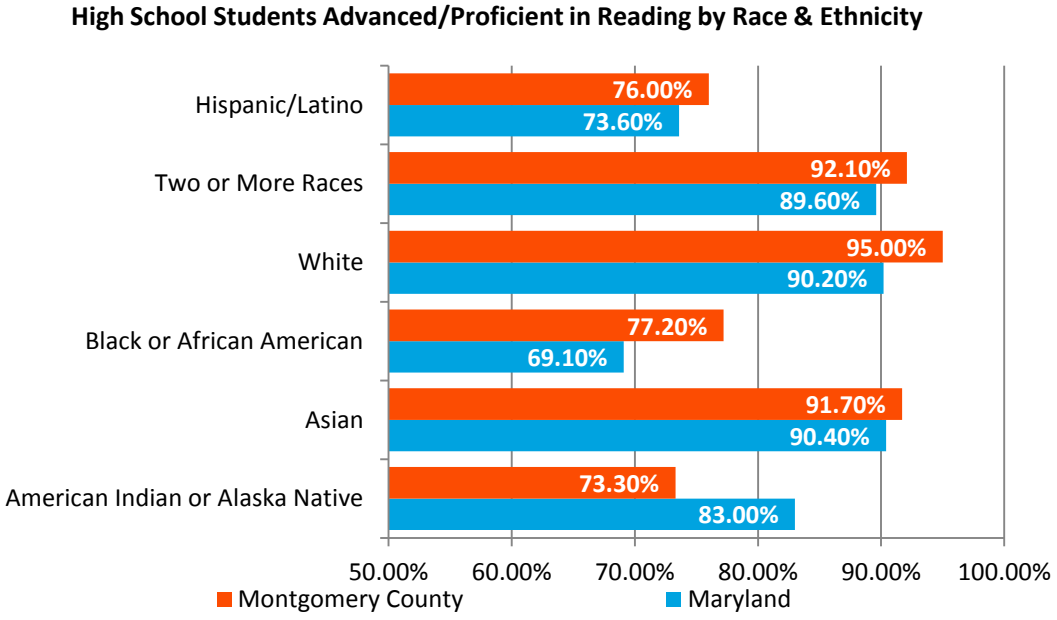


Figure 3. 8th Grade Students Proficiency in Reading by Race and Ethnicity
(Source: Maryland Report Card, 2016)

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. This trend holds for the state of Maryland overall (Figure 4).

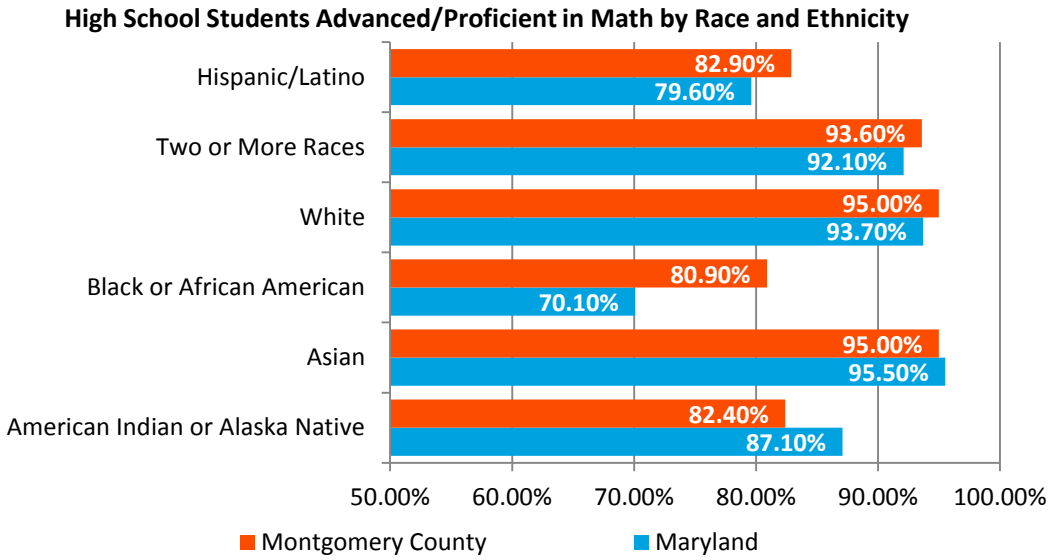


Figure 4. 8th Grade Students Proficiency in Math by Race and Ethnicity
(Source: Maryland Report Card, 2016)

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 (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
Montgomery County	Percentage of children who enter kindergarten ready to learn	80%	81%	Asian–87%; AA-78% Hispanic-71% White-90%	83%	85.5%

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

Community Resources

In Shady Grove Medical Center's CBSA, community groups work to reduce the influence of educational disparities by offering supplemental education programs for all ages. 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. 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.

Such programs aim 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, 33.3 percent of the adult population consumes five or more servings of fruits and vegetables daily. This proportion is higher than Maryland's average of 27.6 percent or the country's average of 24.33 percent (Figure 1).

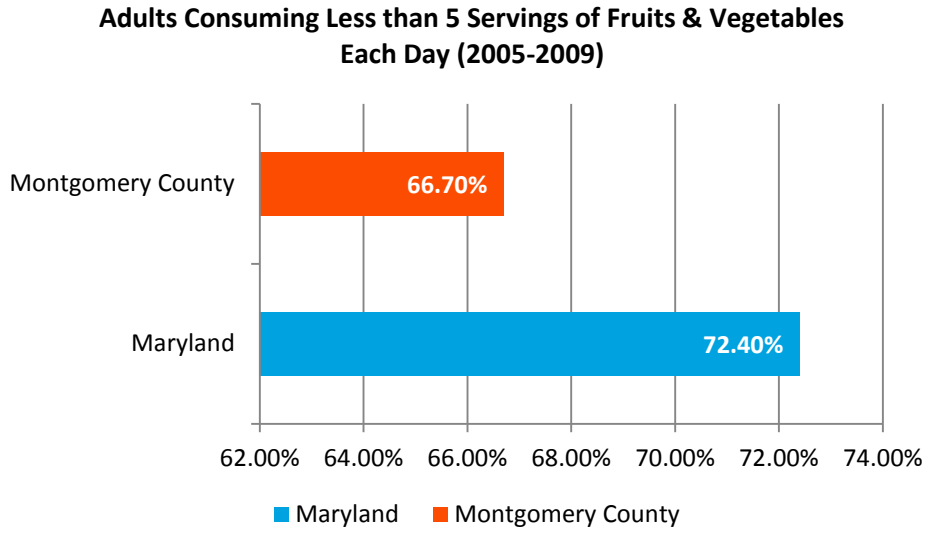


Figure 1. Adults Consuming Less Than 5 Servings of Fruits & Vegetables Each Day
(Source: Community Commons Community Health Needs Assessment, 2013)

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).

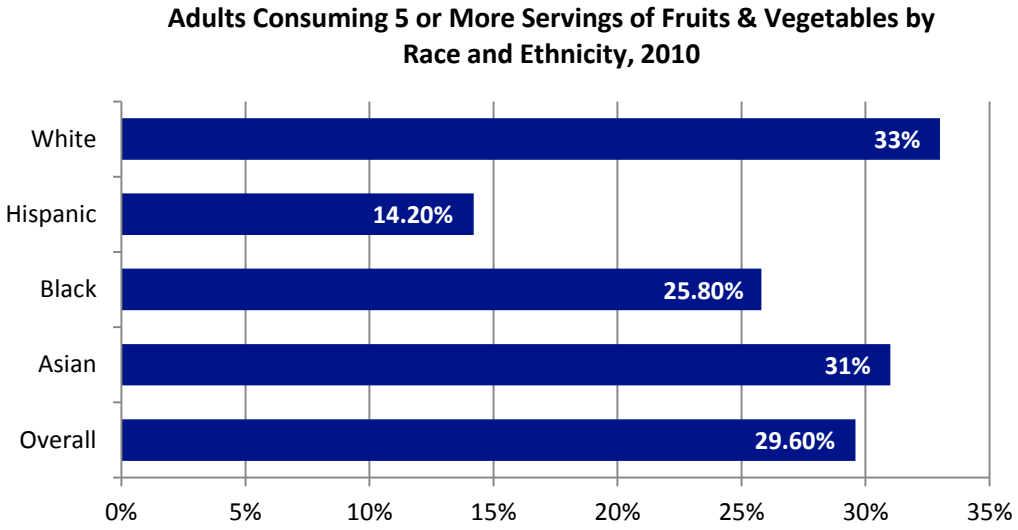


Figure 2. Fruit and Vegetable Consumption by Race and Ethnicity, Montgomery County, 2010
(Sources: Healthy Montgomery. 2014)

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[2]. 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 (Figure 3).

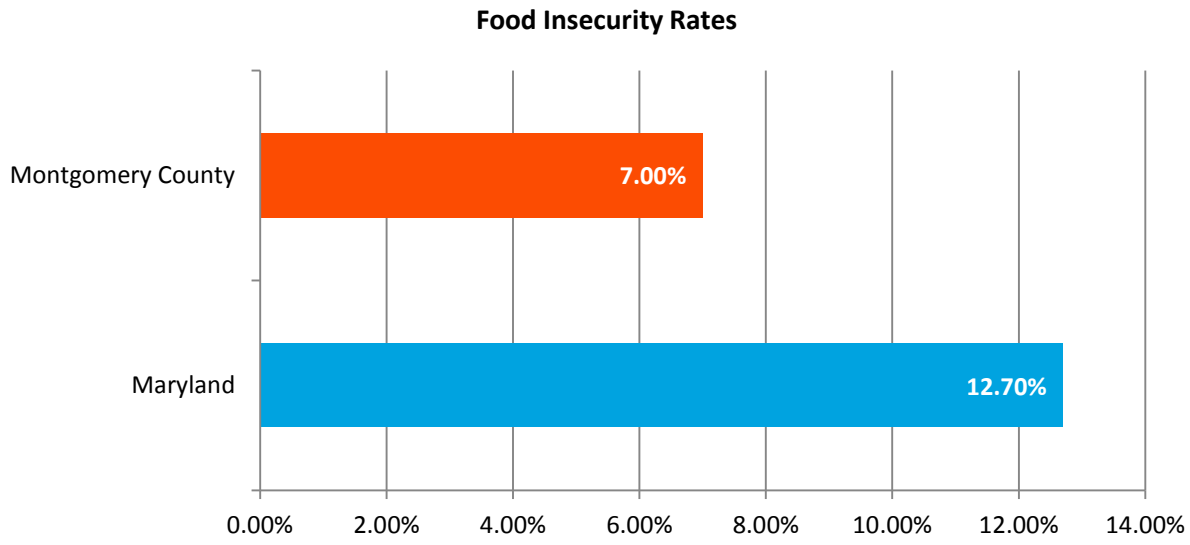


Figure 3. Percentage of Food Insecure Population.
(Source: Feeding America. Map the Meal Gap, 2014)

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) (Figure 4).

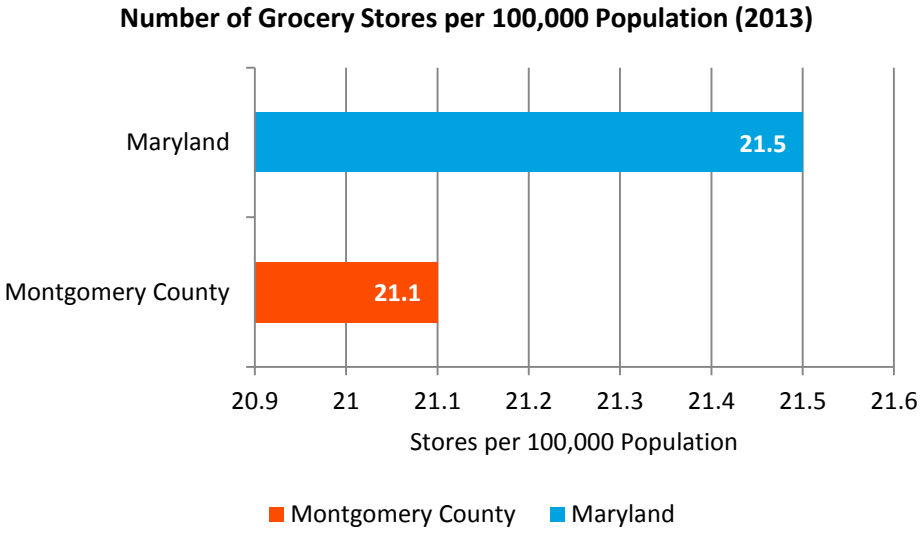


Figure 4. Number of Grocery Stores per 100,000 Population.
(Source: Community Commons Community Health Needs Assessment, 2013)

[2] 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.[3] Residents have access to fast food restaurants at a rate of 81.6 establishments per 100,000 population in Montgomery County, a rate higher than that of the country overall (72.7 per 100,000 population) but lower than that of Maryland (86.6 per 100,000 population) (see Figure 5).

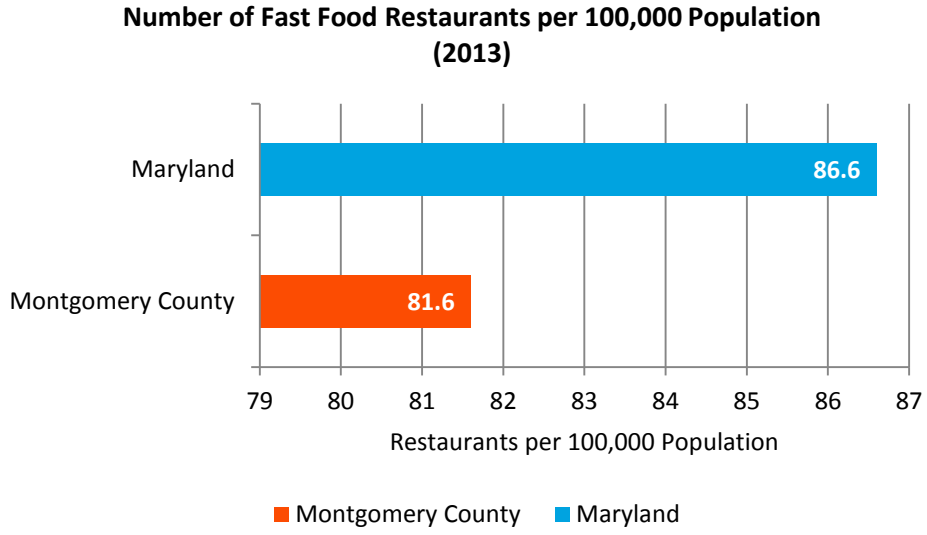


Figure 5. Number of Fast Food Restaurants per 100,000 Population.
(Source: Community Commons Community Health Needs Assessment, 2013)

[3] 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 Shady Grove Medical Center'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 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 and Manna Food Center. 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).

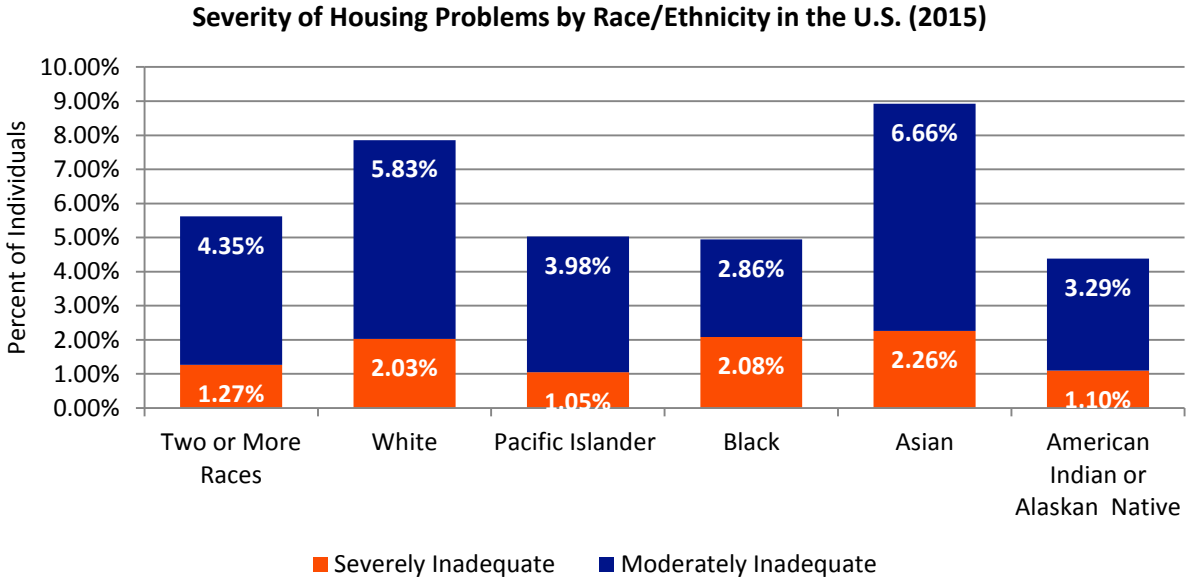


Figure 1. Severity of Housing Problems by Race/Ethnicity in the US, 2015
Note: Physical problems include plumbing, heating, electrical, and upkeep
(Source: U.S. Census Bureau, American Housing Serving, 2015)

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

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)

[4] 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

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 Montgomery County (Figure 2).[5] Since 2015, the number of homeless individuals has decreased by 11 percent in Montgomery County.

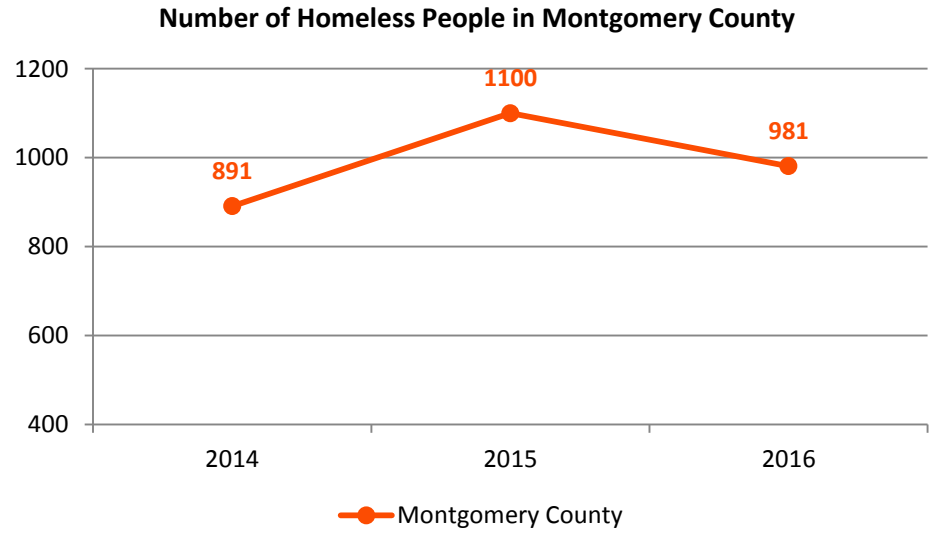


Figure 2. Number of Homeless People in Montgomery County from 2014 to 2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey, 2016)

In Montgomery County, the homeless population in 2016 included 109 homeless family units, made up of 128 adults and 230 children (Figure 3).

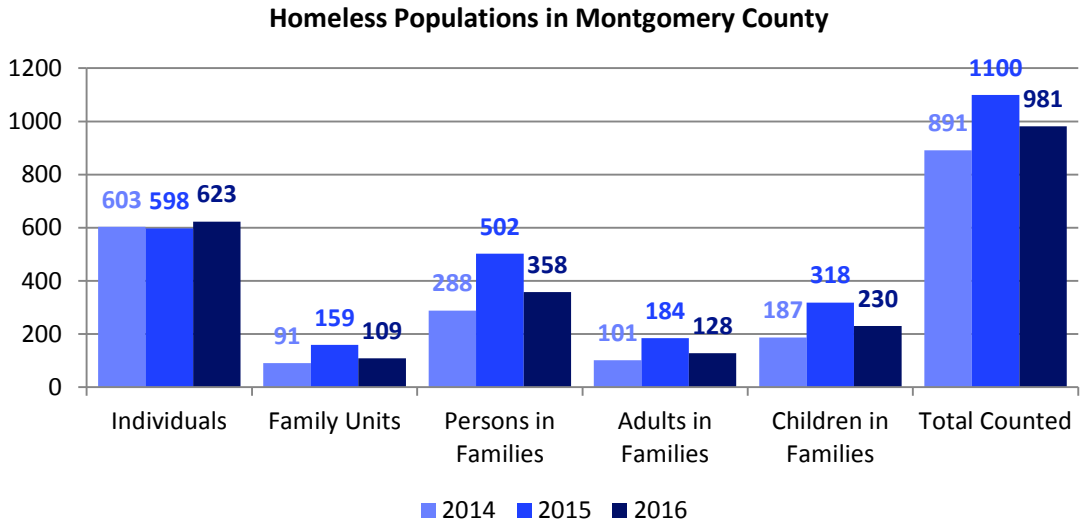


Figure 3. Homeless Populations in Montgomery County, 2014-2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey, 2016)

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

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 (Figure 4).

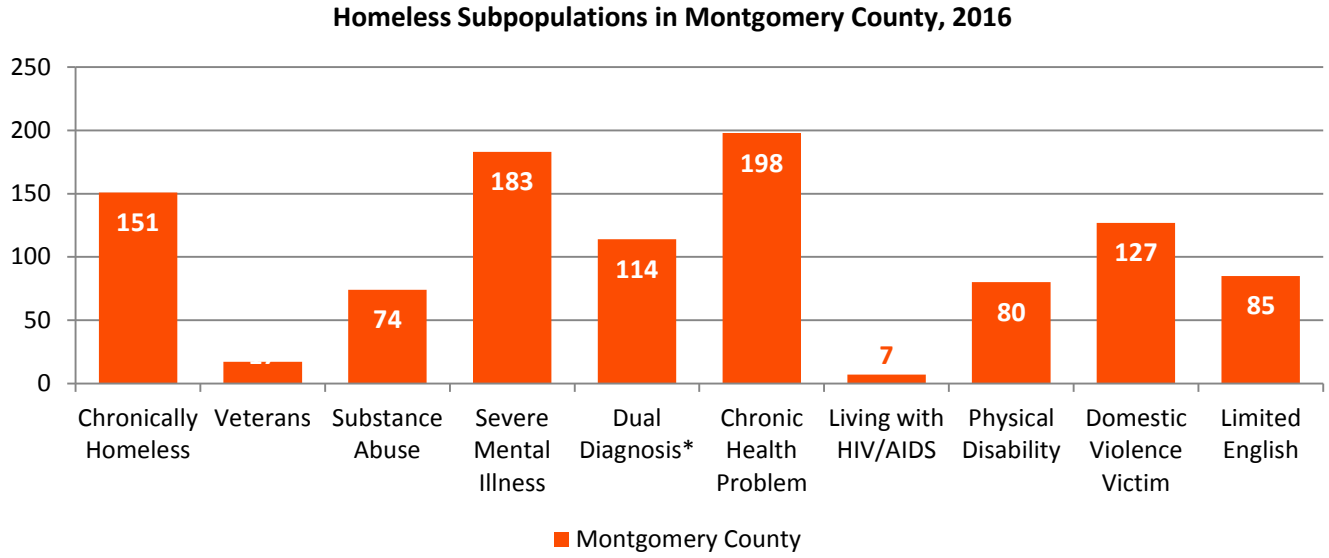


Figure 4. Homeless Subpopulations in Montgomery County in 2016
(Source: Metropolitan Washington Council on Governments Point-In-Time Survey

Community Resources

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.

Shady Grove Medical Center is a member of Adventist HealthCare, which supports and partners with a non-profit organization in Montgomery County called Interfaith Works that 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 Shady Grove Medical Center's CBSA 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 health care 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.

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.

Additional resources for Housing quality include:

- Rockville Housing Enterprises which is a public housing agency with the goal of providing quality, safe and affordable housing to the residents of Rockville
- Montgomery County Department of Housing and Community Affairs offers a Montgomery County Moderately Priced Dwelling Unit Program along with many other housing programs and services
- Housing Opportunities Commission is a public housing agency in Montgomery County which provides a wide variety of housing services for moderate to low income households in the county
- Habitat for Humanity of Montgomery County Maryland offers affordable housing solutions for Montgomery County's low-income residents through homeownership opportunities
- Rebuilding Together of Montgomery County assists low-income families with repairs, modifications and energy efficient upgrades at no cost
- REACH is a program offered through Housing and Community Initiatives, Inc. which helps first time home-buyers with payments and closing costs towards the purchase of their home.

10.4 Transportation

The majority of Montgomery County (65.6 percent) residents drive to work alone or utilize public transportation (15.9 percent) (Figure 1). The mean travel time to work for Montgomery County is 34.4 minutes (Figure 1).

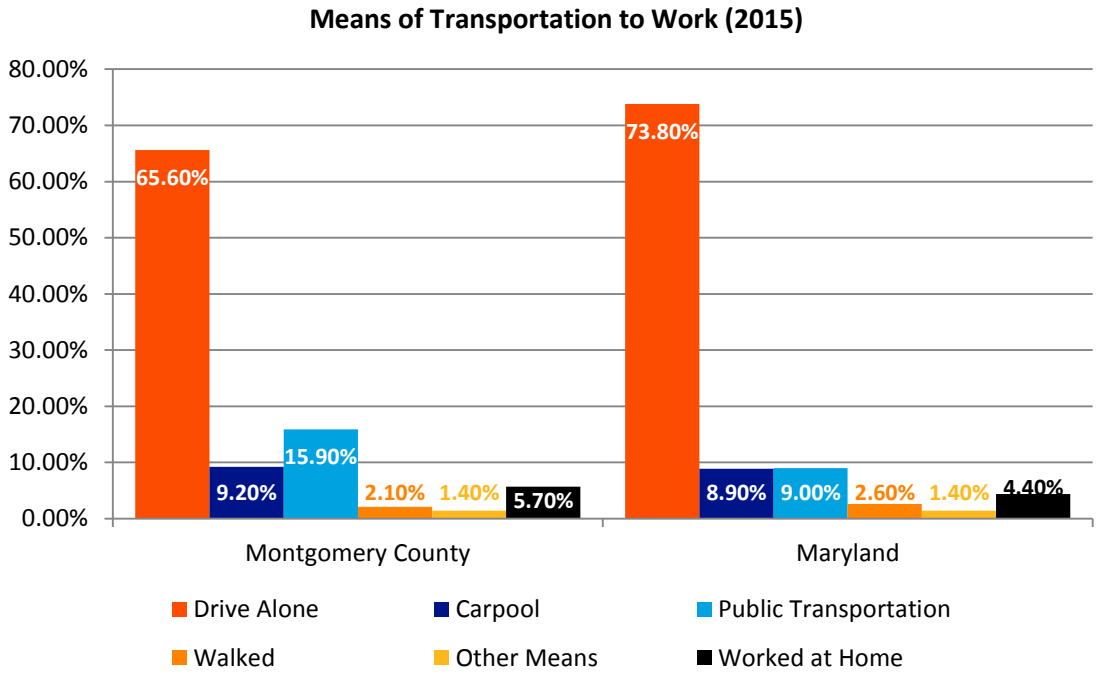


Figure 1. Means of Transportation to Work.
(Source: US Census Bureau, 2015 ACS 1-Year Estimates)

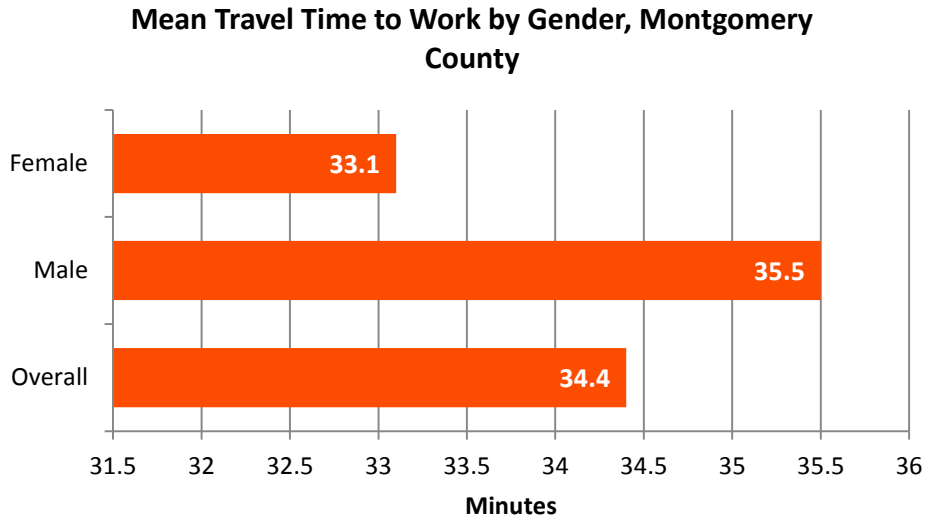


Figure 2. Mean Travel Time to Work by Gender, Montgomery County
(Sources: Healthy Montgomery, 2010-2014)

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). The rate has increased since the 2013 County measures and remains 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
Montgomery	Reduce rate of pedestrian injuries	38.9	35.6	41.3	42.5	35.6

Figure 3. Rate of Pedestrian Injuries per 100,000 Population, Montgomery County, 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.[6] However, Montgomery County has 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).

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

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

- 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.
- 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.

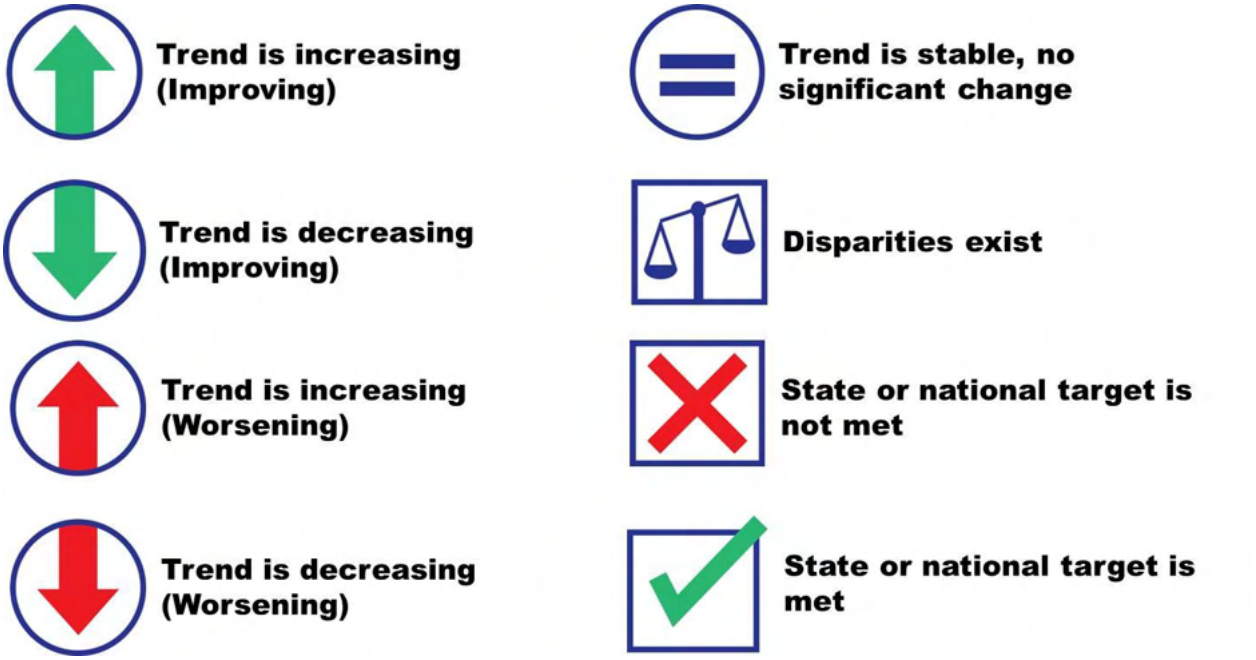
The Maryland Transportation Resource Information Point (MDTRIP) directory is a web resource that allows one to search for modes of transportation by county, vehicle and accessibility type. The directory provides the service contact information and method of payment. It also lists potentially free transportation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

Section V: Evaluation

Introduction

Based on the findings from the 2014-2016 Community Health Needs Assessment, Adventist HealthCare Shady Grove Medical Center 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:



Lung Cancer

Need *As originally identified in the 2014-2016 CHNA*	In the U.S., the leading cause of death among Asian/Pacific Islanders is cancer[1]. Among this group, lung cancer is among the top three types of cancer for both incidence and mortality[2]. In Montgomery County in 2012, the death rate due to lung and bronchus cancer among Asian/Pacific Islanders was 21.4 deaths per 100,000 population[3]. From 2000-2010, among the patients seen at Shady Grove Medical Center (SGMC), the incidence of lung cancer among the Asian population was found to be 9.9%, considerably higher than the 1.83% seen among hospitals nationally. Within Montgomery County, which accounted for 89% of Adventist HealthCare Shady Grove Medical Center's (SGMC) discharges in 2013, the Asian population (14.9%) was significantly higher than that of the state (6.1%) and the country (5.3%).

Program Overview
Programs and initiatives conducted in response to the need identified
	SGMC implemented a program to improve early screening and detection of lung cancer among the Asian population it serves. Through this initiative, SGMC offered low-dose CT lung cancer screenings for high-risk Asian/Pacific Islander communities for a nominal fee.
	
	Strategies for this initiative included:
	• An early detection lung cancer screening program targeted to the Asian/Pacific Islander population with routine follow-up processes for identified lung nodules.
	  ○ Screening events took place approximately 4 times per year
	  ○ Interpreter services were made available at each screening event and during pre-registration via phone
	  ○ Participants were provided with a CD of their scans at the time of the screening
	  ○ Screening results letters were sent to each participant as well as to their primary care physician
	• Additional services provided as needed to participants included:
	  ○ Referral to a primary care provider
	  ○ Assistance with, and reminders for follow-up appointment(s)
	  ○ Tobacco cessation counseling and referral to Adventist HealthCare's free 1-year tobacco cessation program
	
	Targeted outreach took place for the program including reaching out to local area physicians serving the Asian Community; distributing translated flyers at local events, grocery stores, and churches; partnering with local community-based organizations serving the Asian community; and releasing advertisements in local Chinese and Korean language newspapers.

Outcomes
Process and Outcome measures
	Lung Cancer Screenings
	• From 2013-2015, a total of 12 screening events were held, 4 each year
	  ○ A total of 127 individuals received a low-dose CT lung screening
	  ○ Of those screened, 49 had abnormal results

[1] http://www.cdc.gov/nchs/fastats/asian-health.htm
[2] http://www.cancer.org/cancer/news/news/facts-figures-report-cancer-rates-vary-widely-among-asian-americans-native-hawaiians-and-pacific-islanders
[3] Healthy Montgomery

	• From 2014-2015, tobacco cessation counseling was offered at the screening events ○ 19 individuals received a carbon monoxide program and received tobacco cessation counseling ○ 3 individuals elected to enroll in SGMC's free 1-year tobacco cessation program	
Change over Time *Current status of the health need in the community*	Lung and bronchus incidence and mortality rates have been trending downwards[4]. The incidence rate for lung cancer among Asians/Pacific Islanders is third highest in Montgomery County at 27.9 per 100,000. Whites and Blacks have higher incidence rates than Asians. The death rate due to lung and bronchus cancer among Asian/Pacific Islanders in Montgomery County in 2013 was 17.4 deaths per 100,000. Again, whites and Blacks had higher mortality rates than Asians in the county. Montgomery County meets the Healthy People 2020 target of 45.5 deaths per 100,000 due to lung cancer. Adult smoking rates in Montgomery County meet the SHIP 2017 and Healthy People 2020 targets (15.2% and 12%, respectively).	    

[4] Healthy Montgomery (2016). Lung Cancer.

Diabetes

Need *As originally identified in the 2014-2016 CHNA*	Across the state of Maryland, the number of people diagnosed with diabetes grew from 6.8 percent in 1999 to 9.5 percent in 2012[5]. In Montgomery County, diabetes was the 7th leading cause of death[6] (2010-2012) and affected 5.1 percent of the adult population[7] (2011). Among the adult population in Montgomery County, minority and elderly populations were affected disproportionately by diabetes. Over 16 percent of adults 65 and over had been diagnosed compared to 8.3 percent of 45 to 64 year olds, and 3.1 percent of 18 to 44 year olds[8]. Among minority populations in 2009, Blacks (16.3 percent) and Asians (8.9 percent), experienced higher incidence rates than non-Hispanic Whites (6.5 percent)[9]. Disparities could also be seen for diabetes mortality rates. From 2005-2009, Blacks experienced a death rate 2.5 times that of Whites (2005-2009)[10].
Program Overview *Programs and initiatives conducted in response to the need identified*	The primary objective of this initiative was to increase access to education and resources for uninsured diabetic individuals in Montgomery County in order to increase confidence and skills in better managing and controlling their diabetes. Adventist HealthCare Shady Grove Medical Center (SGMC) implemented a series of programs to improve diabetes control and management. These programs (outlined below) were, and continue to be, offered free of charge and are targeted to individuals with pre-diabetes as well as diabetes. **Pre-Diabetes Classes:** SGMC's free pre-diabetes classes offer education on how to manage prediabetes and prevent type 2 diabetes in a two-class series. Each class in the two part series is approximately 2 hours in length. Classes are offered at SGMC every other month and are led by a Registered Nurse Certified Diabetes Educator (CDE). **Mobile Med Shared Medical Appointments:** This program provides informal diabetes self-management education to individuals in a group medical appointment setting at Mobile Med in Rockville. Patients that would benefit from additional diabetes education and support are identified by Mobile Med physicians and invited to these sessions. SGMC's outpatient diabetes educator provides diabetes education to the group as they each take a turn visiting their health care provider. While information topics are pre-planned, the sessions are kept informal allowing for the discussion to be guided by participants' concerns and information needs. These sessions take place every other month, lasting

[5] MD Department of Health and Mental Hygiene. Retrieved: http://fha.dhmh.maryland.gov/cdp/pdf/ReportDiabetes.pdf Accessed 2013.
[6] https://data.montgomerycountymd.gov/en/Health-and-Human-Services/Leading-Causes-of-Death-Total-Population-2010-2012/uyei-igdu
[7] Healthy Montgomery
[8] http://www.healthymontgomery.org/javascript/htmleditor/uploads/Health_Section_Sept_7_2011_CRS.pdf
[9] http://www.healthymontgomery.org/javascript/htmleditor/uploads/Health_Section_Sept_7_2011_CRS.pdf
[10] MD Department of Health and Mental Hygiene. Maryland Chartbook of Minority Health and Minority Health Disparities Data. Third Edition, December 2012. Retrieved: http://dhmh.maryland.gov/mhhd/Documents/Maryland%20Health%20Disparities%20Data%20Chartbook%202012%20corrected%202013%2002%2022%2011%20AM.pdf

	from 1-2 hours depending on participant volume and needs. Each participant also receives a diabetes self-management guide developed by the American College of Physicians. **Eat Well for Health – Nutrition & Cooking Class:** These monthly hour long classes are designed for diabetes as well as cancer patients and survivors. Participants are able to learn how different foods affect their bodies and which ingredients can help support their health. Each class focuses on a different food group or theme and includes an educational session and Q&A led by a registered dietician followed by a cooking demonstration (and sampling) from Adventist HealthCare's executive chef. Each participant is provided with copies of the educational resources reviewed as well as the recipes demonstrated to take home with them. **Diabetes Self-Management Program (DSMP):** Developed by Stanford University, the DSMP is an evidence-based workshop that is designed to be highly interactive and build participants' skills and confidence in managing their chronic condition and maintaining a healthy and active life. One workshop takes place over six weeks and includes a total of six, 2.5 hour sessions held weekly. Each workshop is led by two trained instructors. Adventist HealthCare has held two trainings thus far via Health Quality Indicators (formerly Virginia Health Quality Center) to certify its health educators to be instructors. Several of those trained are certified to offer the course in both English and Spanish. **Complete Health Improvement Program (CHIP):** The Complete Health Improvement Program (CHIP) is a research-based, lifestyle enrichment program designed to reduce disease risk factors through the adoption of better health habits and lifestyle modifications. The goal of the program is to lower blood cholesterol, hypertension, and blood sugar level, as well as to reduce excess weight by improving dietary choices, enhancing daily exercise, increasing support systems, and decreasing stress. The 6 week program includes a total of 12 two-hour sessions held twice a week. **Community Health Screenings and Education:** Partnering with groups such as community centers, residence communities, schools, non-profit organizations, and faith-based organizations, among others, SGMC offers free body fat and BMI screenings in the community. These screenings are offered at various events, locations, and times. Screenings are conducted by health educators that provide each individual with an overview of their results and what they mean as well as a brief counseling session, if desired, to discuss health behaviors, lifestyle, and additional resources.

Outcomes
Process and Outcome measures
	Pre-Diabetes Classes
	• Classes were held every other month, with approximately 5-6 classes each year
	• A total of sixteen 2-session classes were held with 56 participants
	• Class participants were asked to complete an evaluation and rank each of the following on a scale of 1 (strongly disagree) to 5 (strongly agree). Seven participants completed the evaluation in 2014, 11 participants completed the survey in 2015; and 13 completed it in 2016. The results were as follows:
	  ○ The class objectives were met: 5.0 (2014); 4.91 (2015); 4.83 (2016)
	  ○ The content was well organized: 5.0 (2014); 4.72 (2015) ; 4.85 (2016)
	  ○ The class material was adequately covered: 5.0 (2014); 4.72 (2015) ; 4.75 (2016)
	  ○ The class topics were relevant: 5.0 (2014); 4.91 (2015) ; 4.75 (2016)

- The instructor was prepared for the class: 5.0 (2014); 4.82 (2015) ; 5.0 (2016)
- The instructor demonstrated expertise in the subject matter: 5.0 (2014); 4.91 (2015) ; 5.0 (2016)
- The instructor presented the material effectively: 5.0 (2014); 4.82 (2015) ; 5.0 (2016)
- Overall, I was satisfied with the instructor: 5.0 (2014); 4.82 (2015) ; 5.0 (2016)
- My knowledge and/or skills increased as a result of this class: 4.86 (2014); 4.73 (2015) ; 4.92 (2016)
- Overall, I was satisfied with this class: 4.86 (2014); 4.73 (2015) ; 4.92 (2016)

Mobile Med Shared Medical Appointments

- Group medical appointments were held approximately 4-6 times per year
- A total of 14 group medical appointment sessions were held with 54 participants

Eat Well for Health – Nutrition & Cooking Class (January 2015-December 2016)

- A total of 24 classes were held with 505 participants
- Class topics varied each month focusing on things such as: nutritional benefits of various fruits and vegetables and tips for cooking them; cooking with seasonal fruits and vegetables; adding flavor with herbs and spices; safe knife skills; farmer's markets; healthy variations for occasions such as Thanksgiving, Christmas, and summer cookouts; and quick and healthy breakfasts.

Diabetes Self-Management Program (DSMP) (July 2015- December 2016)

- Two 4-day trainings were held by Health Quality Innovators at Adventist HealthCare to certify instructors for the DSMP course in English and Spanish.
- A total of 7 six-week workshops have been completed. Workshops took place at: The Oaks at Four Corners, Shady Grove Community Center, Rockville Senior Center, Gaithersburg Public Library, Ingelside at King Farm, Mid-County Community Center, and White Oak Community Center.
    - 82 individuals attended a workshop, with over 276 total encounters
    - Participant Demographics (approximately 61 of the 82 individuals provided demographic data):
        - Age Range: 47-94
        - Sex: 42 female, 19 male
        - Race: 42 White, 9 Black, 4 Asian, 4 American Indian or Alaska Native, 1 Other
        - Ethnicity: 15 Hispanic, 46 Non-Hispanic
        - Health Insurance:
            - 18 Medicare only
            - 2 Medicaid only
            - 13 Private Insurance
            - 11 Medicare and Medicaid
            - 15 Medicare and Private
        - Highest level of education:
            - Five 8th grade or less
            - 1 some high school
            - 8 high school diploma
            - 11 some college or technical school
            - 15 college degree

- 18 graduate or professional degree
    - Among the participants:
        - 10 had pre-diabetes
        - 4 had type 1
        - 37 had type 2
        - 6 did not have diabetes
        - 3 were unsure if they had diabetes
- Of the 72 participants, 32 completed the pre- and post-assessments and had the following outcomes:
    - 18 reported an increase in fruit and vegetable consumption
    - 16 reported an increase in exercise frequency
    - 13 reported that they were checking their feet more frequently
    - 3 reported an increase in how frequently they test their blood sugar

Complete Health Improvement Program (CHIP)

- The CHIP program has been held twice at SGMC; once in 2015 and 2016.
- There were a total of 30 participants; 11 in 2015 and 19 in 2016. Among the 30 participants, 50% were white, 40% were Black, 6.7% were Asian, and 3.3% were Hispanic.
- Outcomes for the 2015 program include:
    - Average weight loss of 7.6 pounds. The group as a whole lost 83.6 pounds.
    - Average decrease of 8.64 in systolic and 2.55 in diastolic blood pressure.
    - Average decrease of 1.24 in BMI.
    - Average decrease of 2.14 inches in waist circumference. The group as a whole lost 23.55 inches in waist circumference.
    - Average decrease of 1.96 inches in hip circumference. The group as a whole lost 21.6 inches in hip circumference.
    - Average drop of 5 mg/dl in glucose.
    - Average drop of 19.1 mg/dl in cholesterol.
    - Among the 11 participants, each logged an average of 149,700 steps. The group as a whole logged 1,646,706 steps.
- Outcomes for the 2016 program include:
    - Average weight loss of 5.6 pounds. The group as a whole lost 106.6 pounds.
    - Average decrease of 6.53 in systolic and 6 in diastolic blood pressure.
    - Average decrease of 1.12 in BMI.
    - Average decrease of 1.2 inches in waist circumference. The group as a whole lost 22.85 inches in waist circumference.
    - Average decrease of 1.46 inches in hip circumference. The group as a whole lost 27.7 inches from the hip.
    - Average drop of 0.12 in A1C scores.
    - Average drop of 11.12 mg/dl in cholesterol.
    - Among the 11 participants, each logged an average of 325,172 steps. The group as a whole logged 5,202,753 steps.

Community Health Screenings and Education

- Within SGMC's service area, the following screenings and corresponding health education were provided:
    - Body Mass Index: 137 (2015); 60 (2016)
        - Underweight: 1.46% (2015); 1.67% (2016)

	▪ Normal: 56.93% (2015); 35% (2016) ▪ Overweight: 24.09% (2015); 35% (2016) ▪ Obese: 17.52% (2015); 21.67% (2016) ○ Body Composition/Body Fat Percentage: 148 (2015); 60 (2016) ▪ Low: 9.46% (2015); 1.67% (2016) ▪ Normal: 54.73% (2015); 23.33% (2016) ▪ High: 23.65% (2015); 35% (2016) ▪ Very High: 12.16% (2015); 26.67%(2016)	
Change over Time *Current status of the health need in the community*	Asian adults in Montgomery County experienced the highest prevalence of diabetes at 9.3 percent compared to 7.6 percent of Blacks or 7.2 percent of whites. Diabetes is more prevalent among men and among seniors aged 65 years or older. Very recently (2014), deaths due to diabetes and emergency room visits related to diabetes have started to decrease in Montgomery County. Montgomery County meets the SHIP 2017 target of having less than 186.3 diabetes-related ER visits per 100,000 population.	   

Breast Cancer

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). The breast cancer mortality rate in Montgomery County did not meet either Healthy People 2010 or Healthy People 2020 targets (21.3 per 100,000 or 20.7 per 100,000). Incidence rates among whites were higher than that of Blacks, but Black women had the higher mortality rates.
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 Shady Grove Medical Center. • Reduce the incidence, prevalence, and mortality rates of breast cancer in Montgomery 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 Shady Grove Medical Center 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, 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. **Breast Cancer Support Group:** The free Breast Cancer Support Group meets once a month, and provides support and information to individuals coping with breast cancer. Meetings are led by a team of patient navigators and a community outreach representative. Attendants are able to discuss their progress, challenges, and connect with other people affected by breast cancer. Current patients, survivors, caregivers, families and friends are welcome to attend. **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 2,365 breast cancer screening and diagnostic services were provided
	  ○ 1,871 of these services were screening mammograms. The remaining 494 services were diagnostic, including both mammograms and sonograms.
	  ○ Demographics of individuals served:

	▪ Race: 9.93% white; 14.42% Black; 13.45% Asian; 0.04% American Indian or Alaska Native; 38.35% other; 23.81% unknown ▪ Ethnicity: 65.04% Hispanic/Latino ▪ Age: 0.93% under 40; 41.24% were 40-49; 51.27% were 50-64; 6.56% 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 for the year, ranging from a high of 51 days in January to a low of 22 days in April. ○ Monthly Average: 31.3 days (compared to 37.8 days in 2015) ○ While the numbers have been improving consistently, SGMC 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. **Breast Cancer Support Group (January 2015-October 2016)** • A total of 12 support group sessions were held with a total of 62 encounters **Look Good Feel Better** • Look Good Feel Better was held 13 times • There were a total of 46 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, indicating an increase in breast cancer incidence rates. Mortality rates for breast cancer have been decreasing. The current mortality rate is 22.6 per 100,000 in Montgomery County. Montgomery County does not meet the Healthy People 2020 target of 20.7 deaths per 100,000 for breast cancer. American Indians/Alaskan Natives in Montgomery County have the highest rate of breast cancer incidence. However, 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. Across the county and the state, Black women had the highest rates of babies with low or very low birth weights (Montgomery County: 11.2%; Maryland: 13%), as well as the highest rates of infant mortality (Montgomery County: 10.7 per 1,000; Maryland; 13.6 per 1,000).
Program Overview *Programs and initiatives conducted in response to the need identified*	Adventist HealthCare Shady Grove Medical Center 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 Shady Grove Medical Center • increase access to breastfeeding support programs and services for mothers in Montgomery County • reduce infant mortality rate disparities in Montgomery County, particularly among the Black population **Breastfeeding Education, Support & Togetherness (B.E.S.T.):** Through the B.E.S.T. program, Adventist HealthCare Shady Grove Medical Center provides a professionally-led support group for mothers to get information and support for initiating and continuing breastfeeding for six months or longer, as well as assistance with the challenges new mothers face. **Discovering Motherhood:** Through the Discovering Motherhood program, Adventist HealthCare Shady Grove Medical Center provides a free, weekly postpartum support group for mothers with babies under 9 months of age to learn about age-appropriate play, safety and child-proofing the home, nutrition, and coping with the challenges of parenting. **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. **Warm Line:** Through the Warm Line, Adventist HealthCare Shady Grove Medical Center and Washington Adventist Hospital 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. **Perinatal Loss Group:** Families that have experienced the loss of a baby during pregnancy or infancy can enroll in the Perinatal Loss Group, a free six-week support program at

	Adventist HealthCare Shady Grove Medical Center. The group is led by a Registered Nurse/Doula, who is an experienced bereavement specialist for perinatal and infant death.

Outcomes
Process and Outcome measures
	B.E.S.T. (January 2015 – Mid December 2016)
	• B.E.S.T. is typically 1.5 hours in length and offered on a weekly basis
	• B.E.S.T. was held 141 times with a total of 1,965 encounters including mothers and babies
	• In 2016 the B.E.S.T. program began tracking breastfeeding status at 3 months in order to see if it was meeting the Healthy People 2020 exclusive breastfeeding target of 42.6%
	  ○ A total of 83 mothers were contacted three months after they started attending B.E.S.T. Only 58 responded with their breastfeeding status.
	  ▪ Exclusively breastfeeding: 58.62% (34)
	  ▪ Breast milk and formula: 34.48% (20)
	  ▪ Not breastfeeding at all: 6.9% (4)
	
	Discovering Motherhood
	• Discovering Motherhood is typically 2 hours in length and offered on a weekly basis
	• Discovering Motherhood was held 83 times with a total of 2,245 encounters including mothers and babies
	
	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.
	
	Warm Line (January 2015 – December 8, 2016)*
	• A total of 738 individuals called into the warm line and received breastfeeding support from January through December 8, 2016. There were a total of 997 calls/encounters.
	
	Perinatal Loss Group
	• The Perinatal Loss Group completed three 6-week sessions in 2015. Attendees included mothers, fathers, and maternal grandmothers. Groups ranged from 2-7 mothers enrolled at once
	• The Perinatal Loss Group completed three 6-week sessions in 2016. There were a total of 17 attendees across the three 6-week sessions.
	
	**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 County, 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 Montgomery County.

	As of the 2014 measurement period, Blacks in Montgomery County have the highest infant mortality rates (8.3 per 1,000). Overall, the trend is decreasing for infant mortality in Montgomery County.