Health in Montgomery County

2013-2022

A Surveillance Report on Population Health

Montgomery County, Maryland
Department of Health and Human Services
Public Health Services
Health Planning and Epidemiology

Office of Planning and Epidemiology

Health in Montgomery County 2013-2022

A Surveillance Report on Population Health

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Health in Montgomery County 2013-2022

A Surveillance Report on Population Health

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Data

Vital Records – Vital Statistics Administration, Maryland Department of Health

Hospitalization – Maryland Health Services Cost Review Commission

Cancer – Maryland Cancer Registry

Infectious Diseases – Infectious Disease Bureau, Maryland Department of Health

Behavioral Risk Factor Surveillance System (BRFSS) – Maryland Department of Health

Youth Risk Behavior Survey (YRBS) – Maryland Department of Health

Pregnancy Risk Assessment Monitoring System (PRAMS) – Maryland Department of Health

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County Executive's Message

Dear Friends:

On behalf of the residents of Montgomery County, I am delighted to present the Montgomery County Department of Health and Human Services' (DHHS) updated (3rd edition) health status surveillance report on population health. This report offers a comprehensive view of the community's health status and highlights how the health of our residents compares to state and national benchmarks. The data included in this report will help to further guide the county's public health related efforts to address the health needs of our county and prioritize relevant strategies to address the most prevalent health concerns within Montgomery County.

It gives me great pleasure to highlight that we have been named the healthiest county in Maryland for the past several years. Montgomery County continues to make significant strides in not only providing innovative, cutting-edge care, but ensuring that those services are accessible and affordable to all our residents. We continue to focus on the disparities in outcomes within our county, particularly as it relates to chronic disease management and access to care.

I congratulate DHHS on providing a host of services to address health outcomes. In addition, I would like to thank the DHHS staff, County agencies, our partner organizations, and our dedicated and engaged residents for their commitment to promoting health and wellness throughout our community.

We remain committed to ensuring that Montgomery County is the healthiest place to live in the state and country.

Sincerely

Marc Elrich

Marc Elrich
County Executive

DHHS Director's Message

Dear Friends:

I am delighted to share with you our 3rd *Health in Montgomery County 2013-2022* surveillance report on population health. This is the result of hard work from Health Planning and Epidemiology team in Public Health Services under the leadership of our health officer Dr. Davis and Chief of Public Health Services Dr. Ashford. Montgomery County has long been a thought leader and innovator in supporting the health and social service needs of its residents. As a community that is now 32% foreign born and 52% ethnic minority, understanding the health conditions and outcomes as they impact our various populations is an important and ongoing function. When we review the data in the annual county health rankings, we have been very deliberate to not lull ourselves into a false sense of confidence. While we may rank as one of the healthiest Maryland counties, there are many troubling trends that point to disparities in outcomes for several sub-populations ranging from disease specific outcomes to economic and quality of life outcomes and could pertain to health conditions such as asthma, diabetes, hypertension, mortality and morbidity rates stratified by age, sex, race and ethnic subpopulations. We also want to track and study the impact of poverty and wealth on our life expectancy rates and other indicators such as transit-oriented development to name a few.

The intent of this report is to provide a deeper look into various health conditions and data related to demographics, health outcomes, access and utilization. Our intent is to embed health in all our policies and thereby have a comprehensive and holistic approach to our efforts at improving the health of our community. The Department looks forward to our continued shared efforts in becoming the healthiest county in Maryland and in the nation for all of our residents!

Sincerely,

James C. Bridgers, Jr.

James C. Bridgers, Jr., Ph.D., M.B.A.
Director

Health Officer's Message

Dear Friends,

The mission of our health programs is to promote and ensure the health and safety of the residents of Montgomery County. As the largest and most diverse jurisdiction in Maryland, our county's diversity is a tremendous strength. It enriches our communities, informs our approach to public health, and enhances our ability to effectively serve residents.

Montgomery County continues to rank among the healthiest counties in both Maryland and the nation. These strong health outcomes are a result of strategic investments in public health infrastructure, innovative programs, and an engaged community committed to well-being. Expanding access to quality healthcare services, strengthening disease prevention effort, and fostering partnerships to collaboratively address health challenges have been key to achieving these outcomes.

This Health in Montgomery County report provides a snapshot of where we stand in comparison to state and national health outcome benchmarks. While we consistently perform well across many indicators, this data also sheds light on areas that require continued attention. There are concerning trends, including increases in sexually transmitted infections, tuberculosis rates, substance use (e.g., opioid use and overdoses), emergency room visits for management of chronic diseases (e.g., diabetes) and the need for continued vigilance in controlling the spread of infectious disease. Despite our overall strong health outcomes, significant health disparities remain. Disparities in infant mortality and chronic diseases (such as diabetes, heart disease and cancer) and communicable diseases outcomes highlight the need for targeted interventions.

The Health in Montgomery County report serves as a foundation for deeper conversations about the root of health inequities and a guide for our continued efforts to build a healthier, more equitable Montgomery County. By leveraging data, strengthening partnership, and enhancing our existing programs, we can ensure that every resident has the opportunity to achieve their highest level of health.

Thank you for your commitment to health and well-being. Together we will create a healthier future for all.

Sincerely,

Kisha N. Davis, MD, MPH, FAAFP
Health Officer

Public Health Services Chief's Message

Dear Colleagues, Partners, and Residents of Montgomery County,

It is with great pride that I present the updated **Health in Montgomery County 2013-2022: A Surveillance Report on Population Health**. This report, and the outcomes enclosed, reflect the dedication and collaborative efforts of our Montgomery County public health community, partners, and local government in advancing the health and well-being of all Montgomery County residents.

Montgomery County continues to be recognized as one of the healthiest counties in the state of Maryland, and the entire country. We are incredibly proud of this achievement. However, this report highlights the persistent disparities and emerging health trends that demand our focused attention. While we have made notable progress in many areas—such as chronic disease management, maternal and infant health, and access to care—gaps in health outcomes persist across racial, ethnic, and socioeconomic lines. The COVID-19 pandemic further underscored these disparities, emphasizing the need for sustained investment in equitable healthcare and prevention strategies.

This report is not just a collection of data; it is a call to action. By identifying health trends, risk factors, and social determinants impacting our communities, we are better equipped to develop targeted interventions and policies that address root causes and drive sustainable improvements. As we continue to do this work, we remain committed to centering health equity in all aspects of the County's public health programs.

Thank you for your partnership and dedication to public health. Together, we will continue to build a healthier, equitable, and more resilient Montgomery County.

Sincerely,

Nina C. Ashford, Dr.PH, MPH
Chief, Public Health Services

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Executive Summary

Overall, health outcomes in Montgomery County have performed better than state and national averages. Nevertheless, a close examination of the overall averages reveals a number of health conditions with increasing trends, and disparities by race/ethnicity, age, sex, and geographic area warrant special attention. It is critical to highlight these areas in order to target efforts and resources to meet the evolving needs of a changing population in the County.

The leading mortality among Montgomery County residents 2020-22 included heart disease (24.9%), cancer (19.5%), and COVID-19 (9.4%). Leading causes of hospitalizations included heart disease (12.4%), injuries (10.6%), and mental health (7.7%), while injuries (17.8%), heart disease (9.7%), and mental health (6.1%) were leading causes of ER visits. Variations exist among population subgroups in sex, age, and race/ethnicity on mortality, hospitalization, and ER visits. The major findings of health topics examined in this report are summarized below.

Demographics, Social Determinants, and Health Care Access

(1) The County's population is becoming more diverse over time. The percentages of NH-Black (18.5% in 2022) and Hispanic (20.3% in 2022) populations have increased while the percentage of NH-White population (40.1% in 2022) is decreasing.
(2) From 2018 to 2022, the percentages of families living in poverty fluctuated in the County. However, the County's overall poverty level in 2022 (7.9%) is lower than Maryland's (9.6%) and much lower than that of the U.S. (12.6%). Hispanic (11.2% in 2022) and NH-Black (14.3% in 2022) families had the highest percentages of families living in poverty between 2018 and 2022.
(3) The overall percentages of individuals without health insurance in the County fluctuated between 2018 and 2022, similar to trends in Maryland and the U.S. The percentage of individuals without health insurance in the County in 2022 (7.4%) was higher than Maryland (6.9%) but lower than the U.S. (8.0%).

Vital Statistics

(1) Births to adolescent mothers in the County are decreasing over time (7.5/1,000 births in 2022). The County's rates are consistently lower than those in Maryland and the U.S. Hispanics had the highest rates of adolescent births in the County (22.9/1,000 births).
(2) The leading causes of death in the County were heart disease (24.9%), cancer (19.5%), COVID-19 (9.4%), cerebrovascular disease (5.4%), and accidents (4.4%).
(3) Overall mortality increased in Montgomery County following the COVID-19 pandemic, with similar trends in Maryland and the U.S. Overall mortality in the County is consistently lower than that of Maryland and the U.S.

Maternal and Infant Health

(1) The County had an overall decreasing trend in the percentage of births with late or no prenatal care until 2020, then increased up to 2022. The County percentage is consistently lower than that in Maryland.

(2) Low birth weight in the County (7.3% in 2022) has been consistently lower than that in Maryland; NH-Blacks had the highest percentage (9.7% during 2018-22).
(3) The infant mortality rate in the County (3.6/1000 births in 2022) is consistently lower than that in Maryland; NH-Blacks had the highest rates (6.2/1,000 births in 2022).

Chronic Disease

(1) Heart disease mortality decreased in the County over time (with the jump in 2020 due to COVID-19 pandemic then decreased again), heart disease related ER visit rates also decreased. County had consistently lower rates of heart mortality (112/100k population) and ER visits (1,062/100k) than in Maryland. NH-Blacks had the highest rates of heart disease mortality (161/100k) and ER visit (2,082/100k).
(2) Overall cancer incidence and mortality rates decreased in the County. County rates were consistently lower than those in Maryland and the U.S.
(3) Diabetes mortality and diabetes related ER visits rates had decreasing trend over time in the County, County rates were consistently lower than those for Maryland. NH-Blacks had the highest rates of diabetes mortality (23.5/100k) and ER visit (613/100k).

Infectious Disease

(1) COVID-19 infection rates in the County increased from 2020 to 2022, rates in the County were lower than Maryland and the U.S.; Hispanic (8,561/100k) and NH-Blacks (8,147/100k) and residents aged 18-34 (9,440/100k) had the highest rates among population subgroups.
(2) Tuberculosis rates in the County were consistently higher than in Maryland and the U.S. (4.7, 2.6, and 2.5/100k respectively in 2022); Asian/PI had the highest rates, while NH-Whites had the lowest.
(3) Even though the rates of sexually transmitted infections of Chlamydia, Gonorrhea, and Syphilis were consistently lower than in Maryland and the U.S., the rates in the County increased over time. NH-Blacks and those aged 20-24 had the highest rates of Chlamydia (451.8/100k) and Syphilis (44.3/100k). NH-Blacks and those aged 25-44 had the highest rate of Gonorrhea (146.6/100k).
(4) HIV rates in the County (10.2/100k in 2022) decreased over time until 2020 then increased back up (likely due to COVID-19 pandemic), County's rates were consistently lower than in Maryland (12.2/100k in 2022); NH-Blacks had the highest rates.

Behavioral Health

(1) Mental health related ER visit rates in the County decreased since 2018 and were consistently lower than Maryland; NH-Blacks (133.9/100k) and those aged 18-34 (1,652/100k) had the highest rates.
(2) Substance use disorder related ER visit rates decreased in the County 2013-22. County rates were consistently lower than those in Maryland.
Drug-induced rates in the County increased over time; NH-Whites (19.3/100k) and those aged 18-34 (30.3/100k) had the highest drug-induced mortality rates.
(3) Suicide mortality, hospitalization, and ER visit rates were consistently lower than those in Maryland. While rates for hospitalization and ER visit decreased, mortality increased. NH-Whites (11.9/100k) and those aged 18-34 had the highest suicide mortality rates, while NH-Blacks and those aged 18-34 had the highest suicide related hospitalization (30.9/100k) and ER visit (416.8/100k) rates.

Injury

(1) Overall injury hospitalization and ER visit rates decreased in the County. County rates were consistently lower than those in Maryland.

(2) Motor vehicle related mortality rates and hospitalization rates decreased in the County. County rates were consistently lower than those in Maryland. Hispanics (10.8/100k) and those aged 18-34 (9.5/100k) had the highest motor vehicle mortality rates. NH-Blacks (816.8/100k) and those aged 18-34 (932/100k) had the highest motor vehicle ER visit rates.

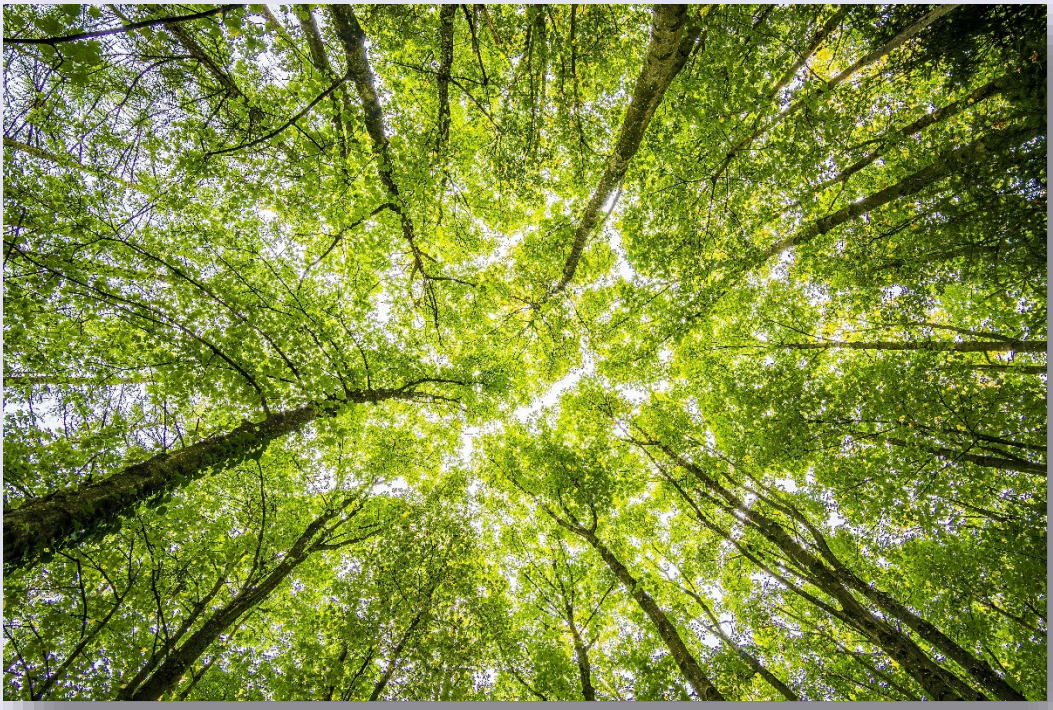
(3) Firearm related ER visit rates stayed stable in the County while the mortality and hospitalization rates had increasing trends overall. County hospitalization and ER visit rates were consistently lower than in Maryland. NH-Blacks and those aged 18-34 had the highest firearm hospitalization (13.1/100k) and ER visit (11.9/100k) rates.

Environmental Health

(1) The percentage of children with high blood lead level (5-9 ug/dL) in the County was much lower than in Maryland (0.4% and 0.6% respectively in 2020).

(2) PM2.5 level in the County fluctuated over time 2015-22, the particulate matter level in the County was similar to that in Maryland but consistently higher than the U.S.

(3) Drinking water quality in the County met all required EPA standards.



Introduction

Montgomery County is the most populous county in Maryland with a population estimate of more than 1.05 million in 2022 from the U.S. Census. Montgomery County is one of the most affluent counties in the country [1] and has the highest percentage (31.4%) of residents over 25 years of age who hold post-graduate degrees. Montgomery County had a median household income of $126,840 in 2021, which is 170% of the U.S. median household income of $74,606. Montgomery County has a very diverse population and there is an increasing trend towards becoming more diverse over time. In 2022, there were 40.1% Non-Hispanic Whites, 18.5% Non-Hispanic Blacks, 15.4% Asians/Pacific Islanders, and 20% Hispanics or Latinos based on the estimate from the U.S. Census. Of the County's population, 32.5% were born outside the U.S.

Montgomery County has had among the highest overall health outcomes ranking in Maryland since 2014, based on the County Health Rankings by the Robert Wood Johnson Foundation [2]. However, ongoing efforts are needed to make improvements in the areas of access to health care, health inequities, and unhealthy behaviors.

Healthy Montgomery is the County's community health improvement process that brings together County government agencies, elected officials, hospital systems, minority health initiatives/program, advocacy groups, academic institutions, community-based service providers, the health insurance community, and other stakeholders to achieve optimal health and well-being for County residents [3]. Topic areas including maternal and infant health, behavioral health, chronic disease, infectious disease, and injury are identified by Healthy Montgomery to be addressed through 4 lenses – access to care, equity, social determinants of health, and data and surveillance.

This report includes all the priority areas identified by Healthy Montgomery, in addition, it comprehensively covers all the major public health areas not addressed by Healthy Montgomery.

This report is organized into three major sections: (1) the summary of all mortality, hospitalization, and ER visits by year, sex, race/ethnicity, and age; (2) health area-specific statistics, and (3) the appendices. Here are the features of this report:

- A section on prevention is included to illustrate the importance of prevention at different levels to reduce disease burden.
- Comparison of disease rates by sex, race/ethnicity, age (where appropriate), and geographic areas are included to illustrate the disparities of risks associated with disease burden.
- Trends in disease burden over time are examined by health topic, to illustrate the effectiveness of prevention and intervention programs.
- Comparisons of disease rates between sub-county areas (i.e., Census Tract, Zip Codes, etc.) and the County overall through Geographic Information System (GIS) mapping are available to identify potential risks of diseases associated with different lifestyles and possible environmental/occupational exposures.

- Comparison of disease rates between the County, Maryland and U.S. are made where appropriate.
- Information from the 2021-22 Maryland Behavioral Risk Factor Surveillance System (BRFSS) and 2022-23 Youth Risk Behavior Survey (YRBS) are included to provide information on both risky and health-prompting behaviors, as well as prevalence estimates of certain health conditions.
- Sub-county level data (i.e. zip code, census tract) on risk behaviors and disease prevalence from BRFSS and population characteristics from American Community Survey of Census based on small area estimates of CDC Places are included where applicable.
- Information from 2016-20 Maryland Pregnancy Risk Assessment Monitoring System (PRAMS) is included to provide maternal attitudes and experience during pregnancy.
- Information from the Healthy People 2030 is included to provide a benchmark for the progress made and areas for ongoing efforts. Among Healthy Montgomery Core Indicators, Healthy Montgomery 2030 Goals and Objectives are used.
- Findings from report of Health Equity in Montgomery County, MD: Healthy Montgomery Core Indicators 2013-21 are included to highlight the trend of health disparity over time among population subgroups on race/ethnicity.
- A section on "Frequently Asked Questions" is included to provide answers to widely received inquiries from the public.
- Technical notes are included in the appendices to provide information on methodological issues.
- Definitions and ICD-9/10 CM codes for mortality and hospitalization associated with each health condition are provided.
- Sources of additional information are included in the appendices.

Department of Health and Human Services

The Department of Health and Human Services (DHHS) is responsible for public health and human services that help address the needs of our community's most vulnerable children, adults and seniors.

DHHS has more than 130 programs and delivers services at more than 20 locations, with more locations throughout schools. The DHHS's core services protect the community's health, protect the health and safety of at-risk children and vulnerable adults and address basic human needs including food, shelter and clothing. The five main service areas of DHHS include Aging and Disability Services, Behavioral Health and Crisis Services, Children, Youth and Family Services, Public Health Services, and Services to End and Prevent Homelessness.

The Office of Community Affairs provides direct services through several programs. DHHS has more than 1,700 employees and provides services to more than 120,000 clients annually (1 in every 8 residents).

Health Planning and Epidemiology

The DHHS Public Health Services program entails Divisions of Community and Population Health, Communicable Disease and Epidemiology, Maternal and Child Health Services, School Health Services, Licensure and Regulatory Services, and Health Planning and Epidemiology.

Health Planning and Epidemiology serves as the expert in planning and analytic epidemiology within DHHS and is responsible for community health needs assessment, program evaluations, disease surveillance and outbreak investigations, health statistics and data management, epidemiology and biostatistics, ongoing development and maintenance of a population data warehouse, and special research projects in collaboration with internal and external partners and academic institutions.

Prevention

Many types of health conditions may be prevented, and considerable progress continues to be made in improving outcomes for individuals with these conditions. Prevention strategies are informed by the natural history of the disease development and are categorized into three levels of intervention.

Primary Prevention – is to limit the occurrence of health conditions by controlling exposure to risk factors or increasing an individual's resistance to them (e.g., through physical exercises). The first step is to identify the relevant exposures and to assess their impact on the risk of developing disease in the population. For example, consuming recommended fruits and vegetables and exercising may help reduce cholesterol and prevent cardiovascular diseases. Maternal smoking during pregnancy may increase risks for preterm birth, low birth weights, and certain birth defects.

This report includes County-specific information from the 2021-22 Maryland Behavioral Risk Factor Surveillance System (BRFSS) survey, 2022-23 Youth Risk Behavior Survey (YRBS), and 2016-20 Pregnancy Risk Assessment Monitoring System (PRAMS) whenever possible and appropriate.

This icon indicates data from the Maryland Behavioral Risk Factor Surveillance System (BRFSS) survey, a survey of Maryland residents to assess risk behaviors and attitudes pertinent to health outcomes.

This icon indicates data from the Maryland Pregnancy Risk Assessment Monitoring System (PRAMS), a CDC surveillance system to assess maternal attitudes and experience before, during, and shortly after pregnancy.

*Some results of this survey are limited by the low response rate. Although the demographic profile of respondents correlated well with the sample's characteristics, the results may be considered representative of the respondents only.

Secondary Prevention – refers to detection of diseases at an early stage when intervention is more effective than at the time of usual diagnosis and treatment. Early detection and intervention can reduce or eliminate the complications related to the condition, including death. Screening represents an important component of secondary prevention. Prenatal visits provide strategic opportunities to identify adverse birth outcomes early and employ appropriate interventions to reduce the consequences of health conditions.

Tertiary Prevention – aims at improving the prognosis and quality of life of affected individuals by offering them the best available treatment and rehabilitation programs.

The ultimate goal of prevention is to reduce the associated morbidity and mortality. It is important to set up long-term objectives for achieving these goals through various prevention and health promotion activities.

Through comparing results with Healthy People 2030, a program of a nationwide health-promotion and disease-prevention goals set by the United States Department of Health and Human Services, it provides information on progress made and areas for ongoing efforts. Objectives from the Healthy People 2030 are included in this report whenever possible and appropriate.

This icon indicates goals of Healthy People 2030 from the United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion.

This icon indicates goals and objectives of Healthy Montgomery 2030 Core Indicators.

This icon indicates findings from the Report of Health Equity in Montgomery County, Maryland: Healthy Montgomery Core Indicators 2013-21.

Summary of Mortality and Hospitalization

Mortality

Table 1. Leading Causes of Death by Year, Montgomery County, 2020-22

	2020		2021		2022		2020-2022	
	%	Rank	%	Rank	%	Rank	%	Rank
Heart Disease	25.4	1	27.1	1	22.1	1	24.9	1
Cancer	18.9	2	19.4	2	20.3	2	19.5	2
COVID-19	14.6	3	8	3	5.2	4	9.4	3
Cerebrovascular Disease	5.1	4	5.2	4	5.9	3	5.4	4
Accidents	4.1	5	4.4	5	4.6	5	4.4	5
Diabetes Mellitus	2.6	6	2.7	6	2.5	6	2.6	6
Chronic Lower Respiratory Disease	2.5	7	2.5	7	2.4	7	2.5	7
Alzheimer's Disease	2.1	8	2.2	8	2.8	8	2.4	8
Influenza & Pneumonia	1.7	9	1.4	10	1.4	10	1.5	10
Septicemia	1.4	10	1.8	9	1.8	9	1.7	9
Nephritis	1.3	11	1.3	11	1.4	11	1.3	11
All Other Causes	20.3		23.9		29.7		24.5	

Figure 1. Leading Causes of Death, Montgomery County, 2020-22

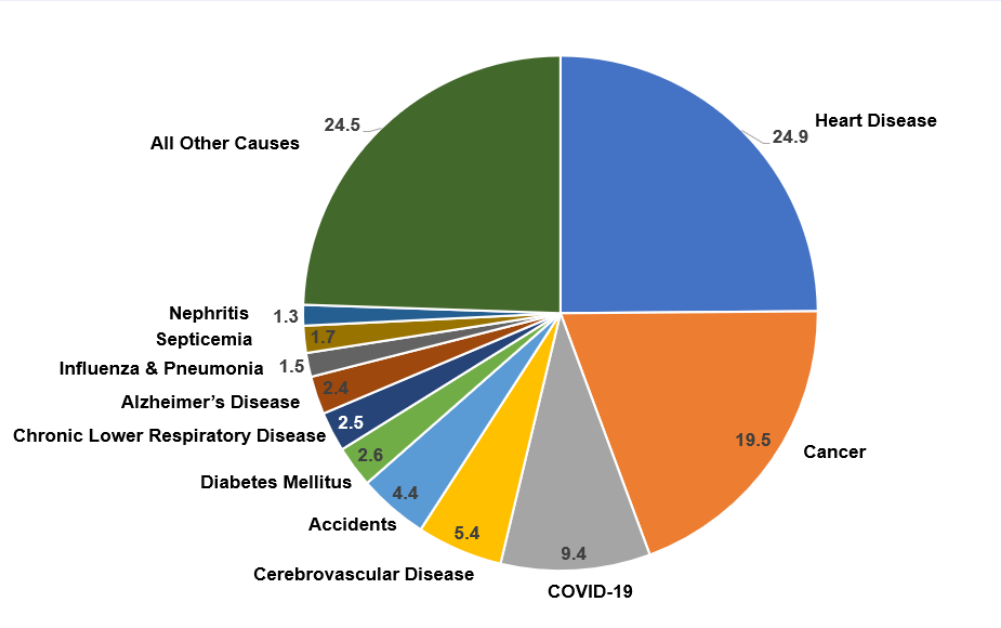


Table 2. Leading Causes of Death* by Sex, Montgomery County, 2020-22

	Male		Female	
	%	Rank	%	Rank
Heart Disease	25.2	1	24.5	1
Cancer	18.8	2	20.3	2
COVID-19	10.7	3	8.2	3
Cerebrovascular Disease	4.4	5	6.4	4
Accidents	5.3	4	3.4	5
Chronic Lower Respiratory Disease	2.0	7	2.9	7
Alzheimer's Disease	1.4	10	3.3	6
Influenza & Pneumonia	1.6	9	1.4	10
Diabetes Mellitus	2.9	6	2.2	8
Septicemia	1.8	8	1.5	9
Nephritis	1.3	11	1.3	11

*based on list of leading causes of death for overall population only

Figure 2. Leading Causes of Death by Sex, Montgomery County, 2020-22

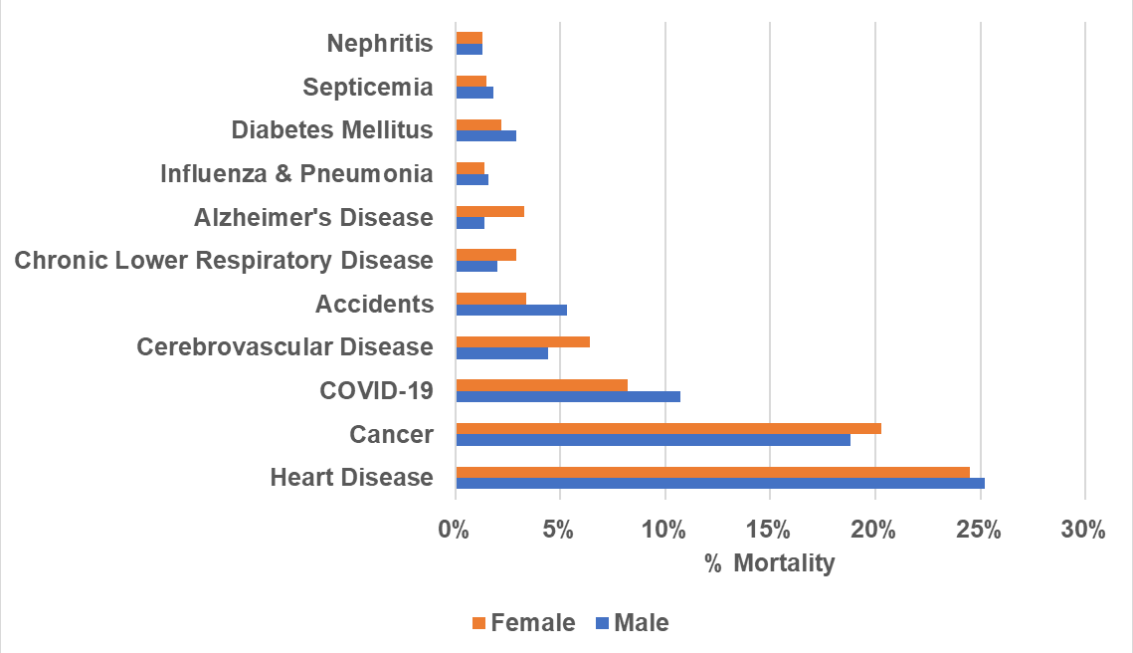


Table 3. Leading Causes of Death* by Race/Ethnicity, Montgomery County, 2020-22

	NH-White		NH-Black		Asian/PI		Hispanic	
	%	Rank	%	Rank	%	Rank	%	Rank
Heart Disease	26.2	1	24.8	1	24.3	1	17.2	3
Cancer	19.2	2	19.3	2	23.3	2	18.1	2
COVID-19	7.5	3	10.1	3	10.9	3	19.6	1
Cerebrovascular Disease	5.3	4	5.1	4	6.4	4	5.4	5
Accidents	4	5	4	5	3.8	5	7.6	4
Chronic Lower Respiratory Disease	3.2	6	1.6	10	1.2	11	1.3	8
Alzheimer's Disease	2.7	7	2	8	1.5	9	1.7	7
Influenza & Pneumonia	1.6	10	1.4	11	1.5	10	1	11
Diabetes Mellitus	2.1	8	3.6	6	3.7	6	2.2	6
Septicemia	1.7	9	2	7	1.8	7	1.1	10
Nephritis	1.1	11	1.9	9	1.8	8	1.2	9

*based on list of leading causes of death for overall population only

Figure 3. Leading Causes of Death by Race/Ethnicity, Montgomery County, 2020-22

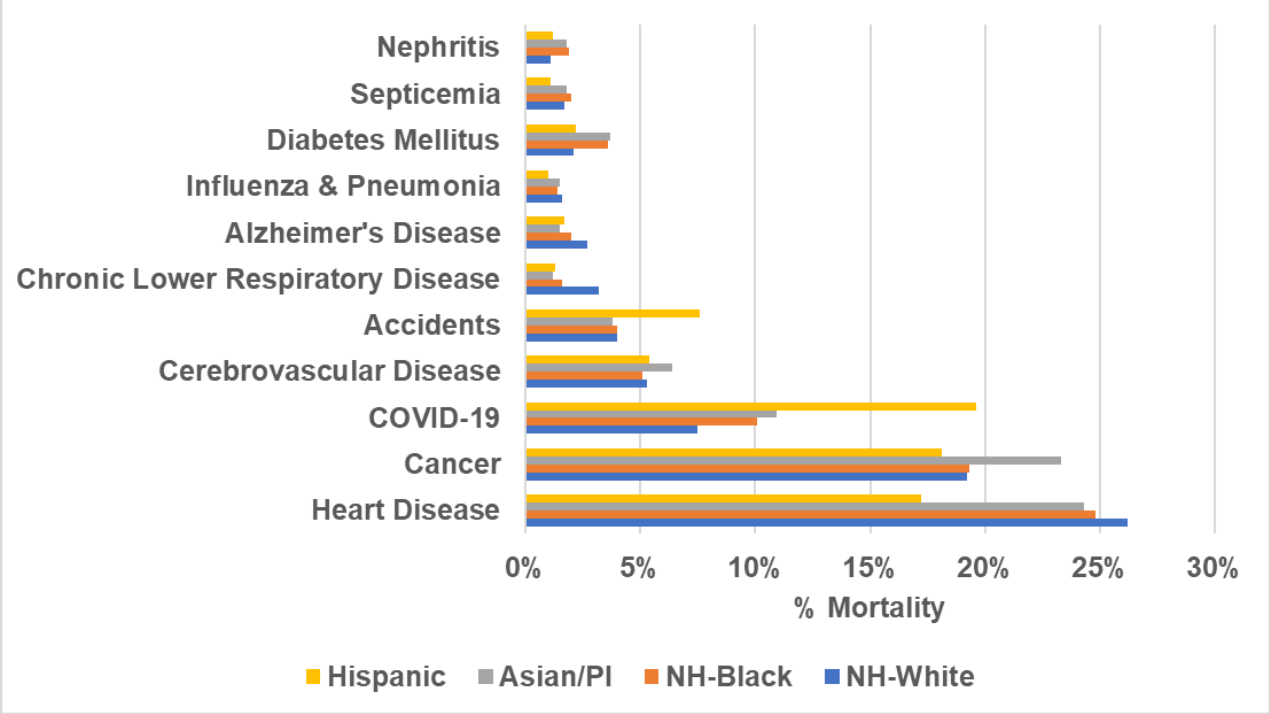
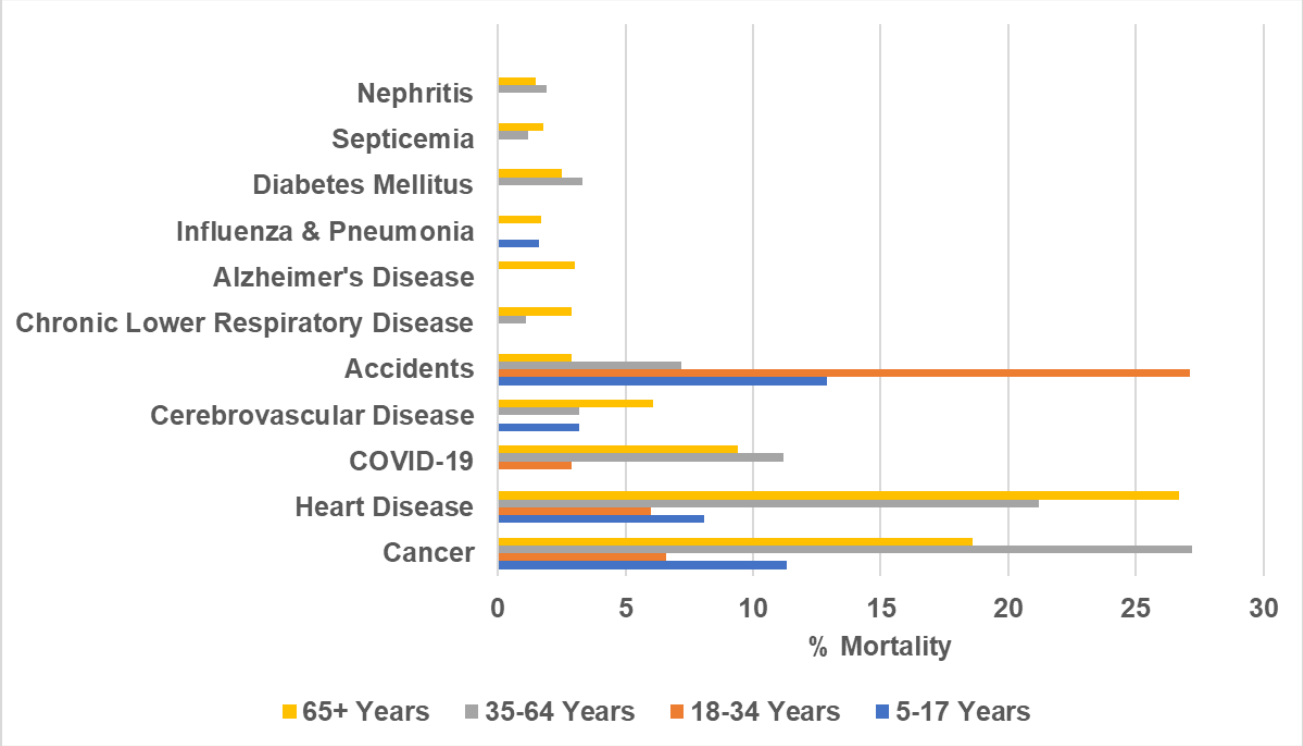


Table 4. Leading Causes of Death* by Age, Montgomery County, 2020-22

	5-17 yrs		18-34 yrs		35-64 yrs		65+ yrs	
	%	Rank	%	Rank	%	Rank	%	Rank
Cancer	11.3	2	6.6	2	27.2	1	18.6	2
Heart Disease	8.1	3	6	3	21.2	2	26.7	1
COVID-19			2.9	4	11.2	3	9.4	3
Cerebrovascular Disease	3.2	4			3.2	6	6.1	4
Accidents	12.9	1	27.1	1	7.2	4	2.9	7
Chronic Lower Respiratory Disease					1.1	9	2.9	6
Alzheimer's Disease							3	5
Influenza & Pneumonia	1.6	5					1.7	10
Diabetes Mellitus					3.3	5	2.5	8
Septicemia					1.2	8	1.8	9
Nephritis					1.9	7	1.5	11

*based on list of leading causes of death for overall population only, percentage less than 0.9 not shown

Figure 4. Leading Causes of Death by Age, Montgomery County, 2020-22



Hospitalization

Table 5. Leading Causes of Hospitalization by Year, Montgomery County, 2020-22

	2020		2021		2022		2020-2022	
	%	Rank	%	Rank	%	Rank	%	Rank
Heart Disease	11.4	1	13.1	1	12.7	1	12.4	1
Injuries	10.6	2	10.7	2	10.5	2	10.6	2
Mental Health	7.9	3	8.3	3	7.1	3	7.7	3
COVID-19	6.2	4	4.6	4	4.6	4	5.1	4
Cancer	4.0	5	4.3	5	4.1	5	4.1	5
Diabetes Mellitus	3.4	6	3.4	6	3.5	6	3.4	6
Cerebrovascular Disease	2.8	7	3.2	7	3.1	7	3.1	7
Chronic Lower Respiratory Disease	1.2	8	1.1	8	1.5	8	1.3	8
Substance Use Disorder	1.2	9	1.0	9	1.0	9	1.1	9
Suicide	0.5	10	0.5	10	0.4	10	0.5	10
All Other Causes	50.9		49.7		51.3		50.7	

Figure 5. Leading Causes of Hospitalization, Montgomery County, 2020-22

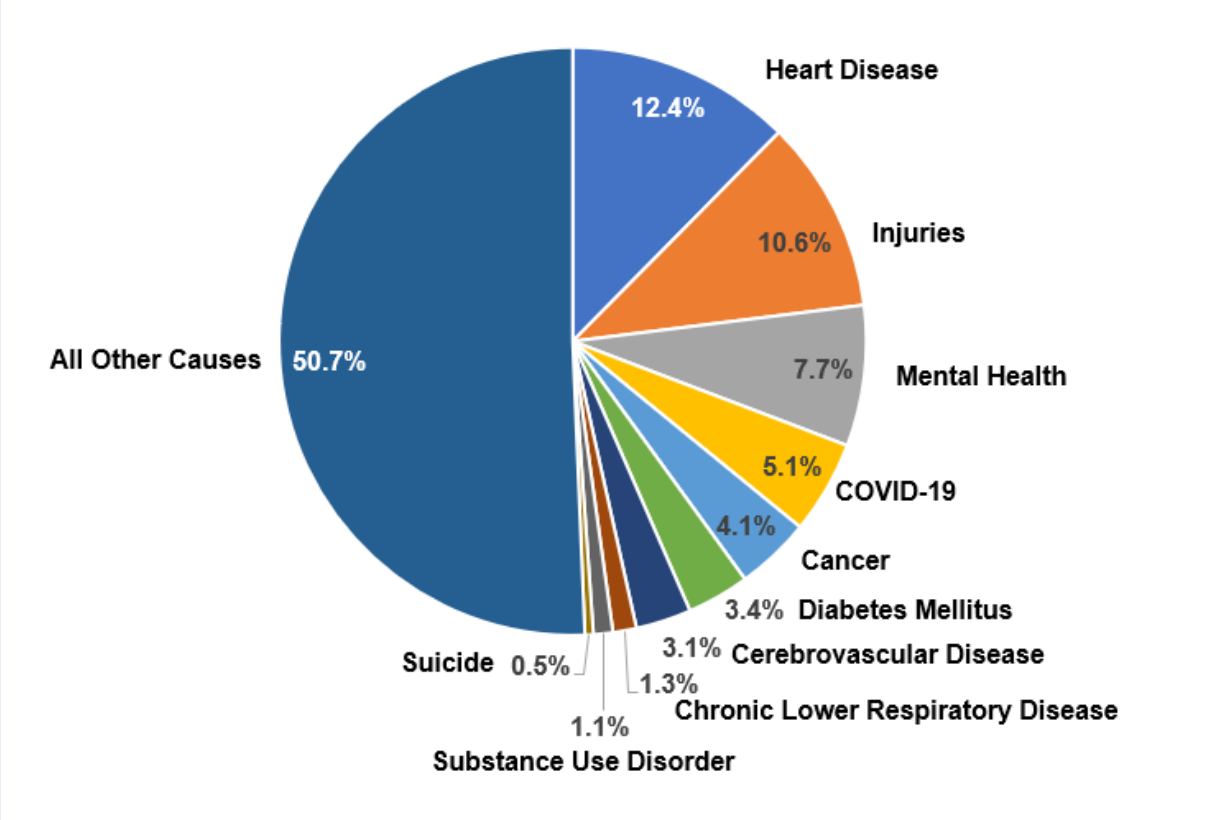


Table 6. Leading Causes of Hospitalization* by Sex, Montgomery County, 2020-22

	Male		Female	
	%	Rank	%	Rank
Heart Disease	16.0	1	9.9	1
Injuries	13.2	2	8.8	2
Mental Health	8.4	3	7.3	3
COVID-19	6.3	4	4.3	4
Cancer	4.8	5	3.6	5
Diabetes Mellitus	4.6	6	2.6	6
Cerebrovascular Disease	3.8	7	2.5	7
Chronic Lower Respiratory Disease	1.3	8	1.3	8
Substance Use Disorder	1.2	9	1.0	9
Suicide	0.6	10	0.4	10

*based on list of leading causes for overall population only

Figure 6. Leading Causes of Hospitalization by Sex, Montgomery County, 2020-22

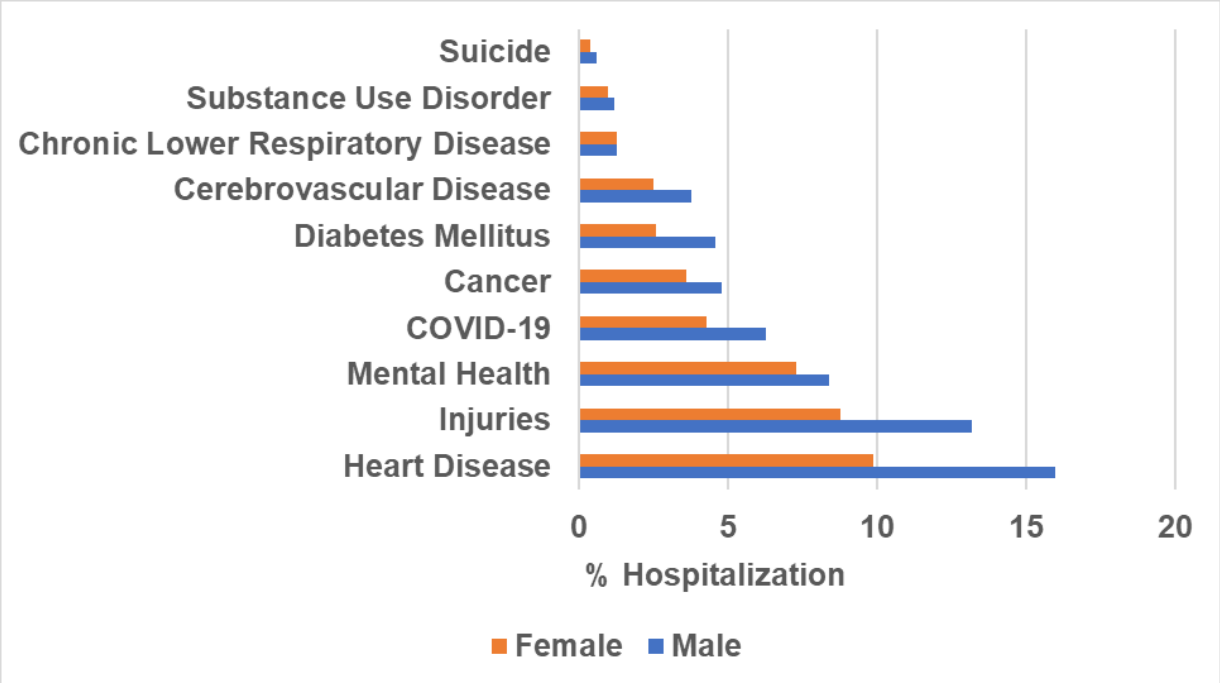


Table 7. Leading Causes of Hospitalization* by Race/Ethnicity, Montgomery County, 2020-22

	NH-White		NH-Black		Asian/PI		Hispanic	
	%	Rank	%	Rank	%	Rank	%	Rank
Heart Disease	15.8	1	13.3	1	11.0	1	6.5	2
Injuries	14.7	2	9.3	2	8.1	2	6.4	3
Mental Health	7.7	3	9.3	3	4.3	5	5.7	4
COVID-19	3.8	5	5.2	4	4.4	4	7.1	1
Cancer	5.0	4	3.9	6	5.3	3	2.5	6
Diabetes Mellitus	3.3	7	4.9	5	3.1	7	2.7	5
Cerebrovascular Disease	3.5	6	3.3	7	3.7	6	1.6	7
Chronic Lower Respiratory Disease	1.5	8	1.5	8	1.0	8	0.9	9
Substance Use Disorder	1.1	9	1.2	9	0.4	9	1.0	8
Suicide	0.5	10	0.5	10	0.4	10	0.3	10

*based on list of leading causes for overall population only

Figure 7. Leading Causes of Hospitalization by Race/Ethnicity, Montgomery County, 2020-22

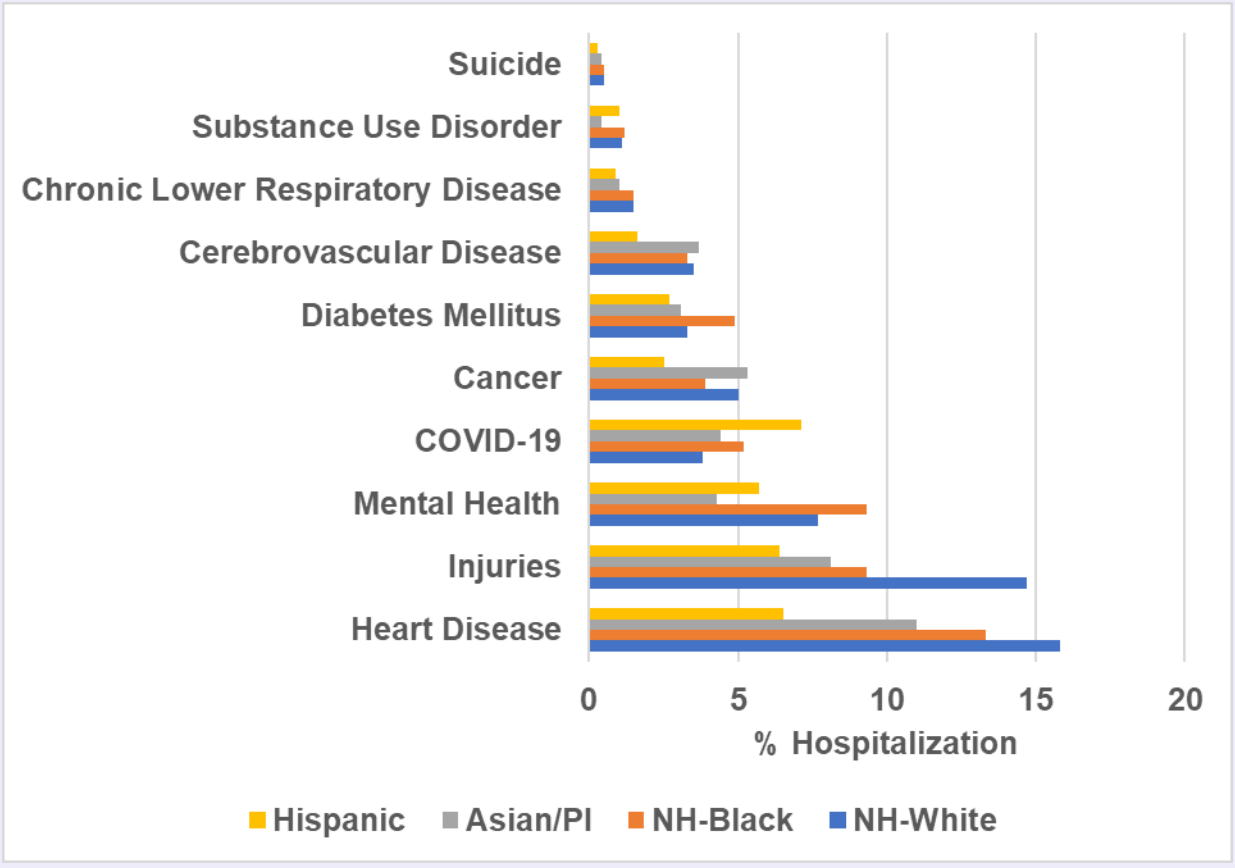
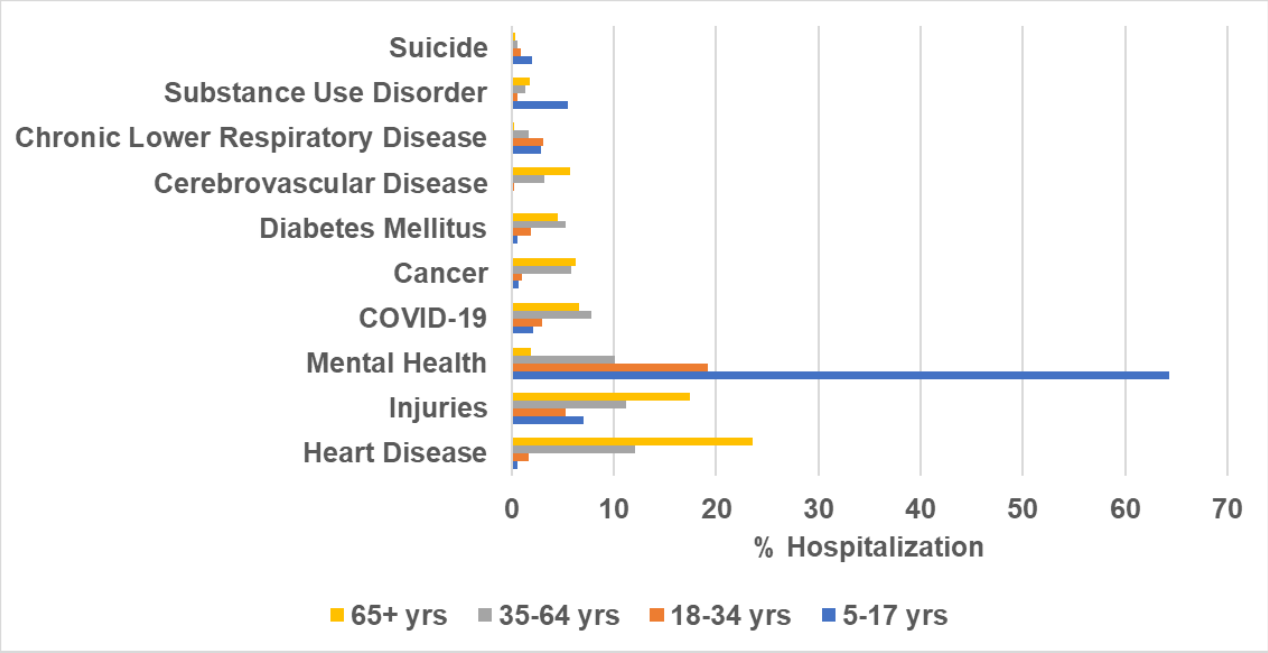


Table 8. Leading Causes of Hospitalization* by Age, Montgomery County, 2020-22

	5-17 yrs		18-34 yrs		35-64 yrs		65+ yrs	
	%	Rank	%	Rank	%	Rank	%	Rank
Heart Disease	0.6	8	1.6	6	12.1	1	23.6	1
Injuries	7.0	2	5.3	2	11.2	2	17.4	2
Mental Health	64.3	1	19.2	1	10.1	3	1.9	7
COVID-19	2.1	5	3	4	7.8	4	6.6	3
Cancer	0.7	7	1.0	7	5.8	5	6.3	4
Diabetes Mellitus	0.5	9	1.9	5	5.3	6	4.5	6
Cerebrovascular Disease	0.0	10	0.2	10	3.2	7	5.7	5
Substance Use Disorder	2.8	4	3.1	3	1.6	8	0.2	10
Chronic Lower Respiratory Disease	5.5	3	0.5	9	1.3	9	1.8	8
Suicide	2.0	6	0.9	8	0.6	10	0.3	9

*Based on list of leading causes for overall population only

Figure 8. Leading Cause of Hospitalization by Age, Montgomery County, 2020-22



ER Visits

Table 9. Leading Causes of ER Visits by Year, Montgomery County, 2020-2022

	2020		2021		2022		2020-2022	
	%	Rank	%	Rank	%	Rank	%	Rank
Injuries	17.5	1	18.3	1	17.5	1	17.8	1
Heart Disease	9.8	2	9.8	2	9.6	2	9.7	2
Mental Health	6.6	3	6.3	3	5.4	3	6.1	3
COVID-19	3.2	4	3.2	4	4.5	4	3.6	4
Chronic Lower Respiratory Disease	3.2	5	2.8	5	3.3	5	3.1	5
Substance Use Disorder	2.7	6	2.4	6	1.6	7	2.3	6
Diabetes Mellitus	2.5	7	2.2	7	2.2	6	2.3	7
Cerebrovascular Disease	0.3	8	0.3	8	0.2	8	0.2	8
Suicide	0.1	9	0.1	9	0.1	9	0.1	9
All Other Causes	54.1		54.7		55.6		54.8	

Figure 9. Leading Causes of ER Visits, Montgomery County, 2020-22

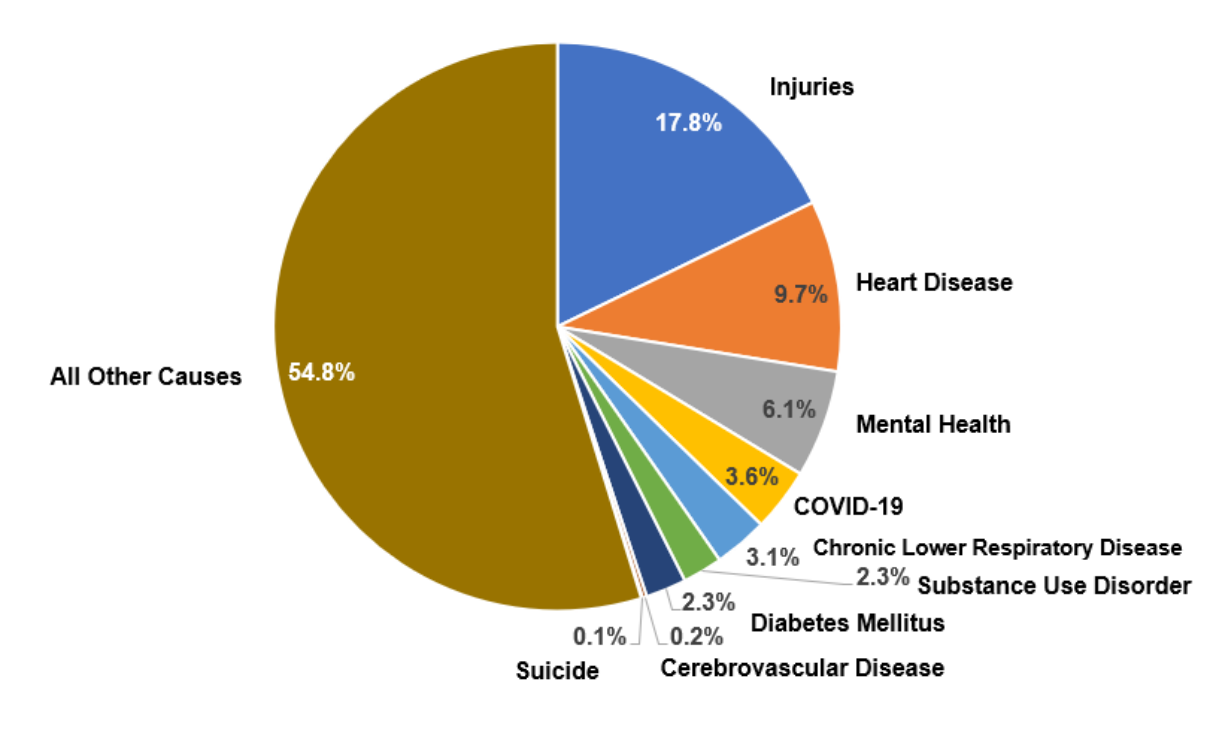


Table 10. Leading Causes of ER Visits* by Sex, Montgomery County, 2020-22

	Male		Female	
	%	Rank	%	Rank
Injuries	20.7	1	15.5	1
Heart Disease	10.6	2	9.1	2
Mental Health	6.0	3	6.3	3
COVID-19	3.7	4	3.5	4
Chronic Lower Respiratory Disease	3.0	6	3.1	5
Substance Use Disorder	3.1	5	1.6	7
Diabetes Mellitus	2.6	7	2.1	6
Cerebrovascular Disease	0.3	8	0.2	8
Suicide	0.1	9	0.1	9

*based on list of leading causes for overall population only

Figure 10. Leading Causes of ER Visits by Sex, Montgomery County, 2020-22

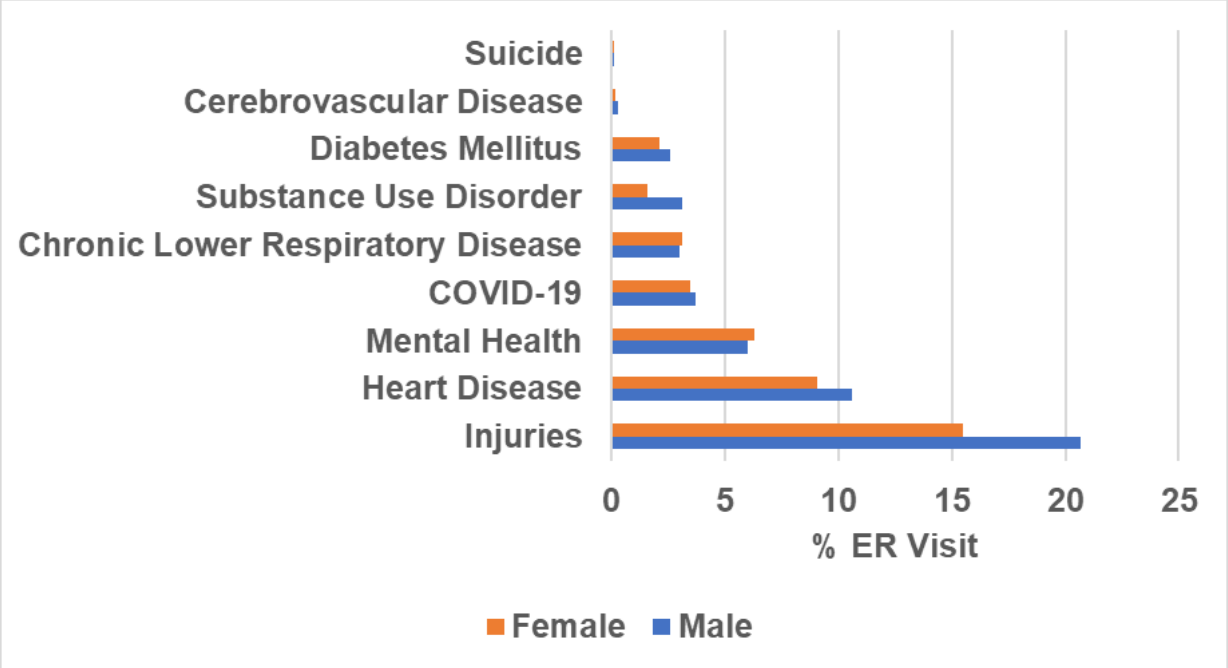


Table 11. Leading Causes of ER Visits* by Race/Ethnicity, Montgomery County, 2020-22

	NH-White		NH-Black		Asian/PI		Hispanic	
	%	Rank	%	Rank	%	Rank	%	Rank
Injuries	21.6	1	14.6	1	15.7	1	16.9	1
Heart Disease	12.0	2	10.3	2	11.8	2	5.7	2
Mental Health	7.0	3	6.6	3	4.6	3	4.5	4
COVID-19	2.7	5	3.5	5	3.8	4	4.8	3
Chronic Lower Respiratory Disease	2.8	4	3.9	4	2.3	6	2.9	5
Substance Use Disorder	2.2	6	3.1	6	1.2	7	1.6	7
Diabetes Mellitus	1.8	7	3.0	7	2.7	5	2.2	6
Cerebrovascular Disease	0.3	8	0.2	8	0.4	8	0.1	8
Suicide	0.1	9	0.0	9	0.0	9	0.1	9

*based on list of leading causes for overall population only

Figure 11. Leading Causes of ER Visits by Race/Ethnicity, Montgomery County, 2020-22

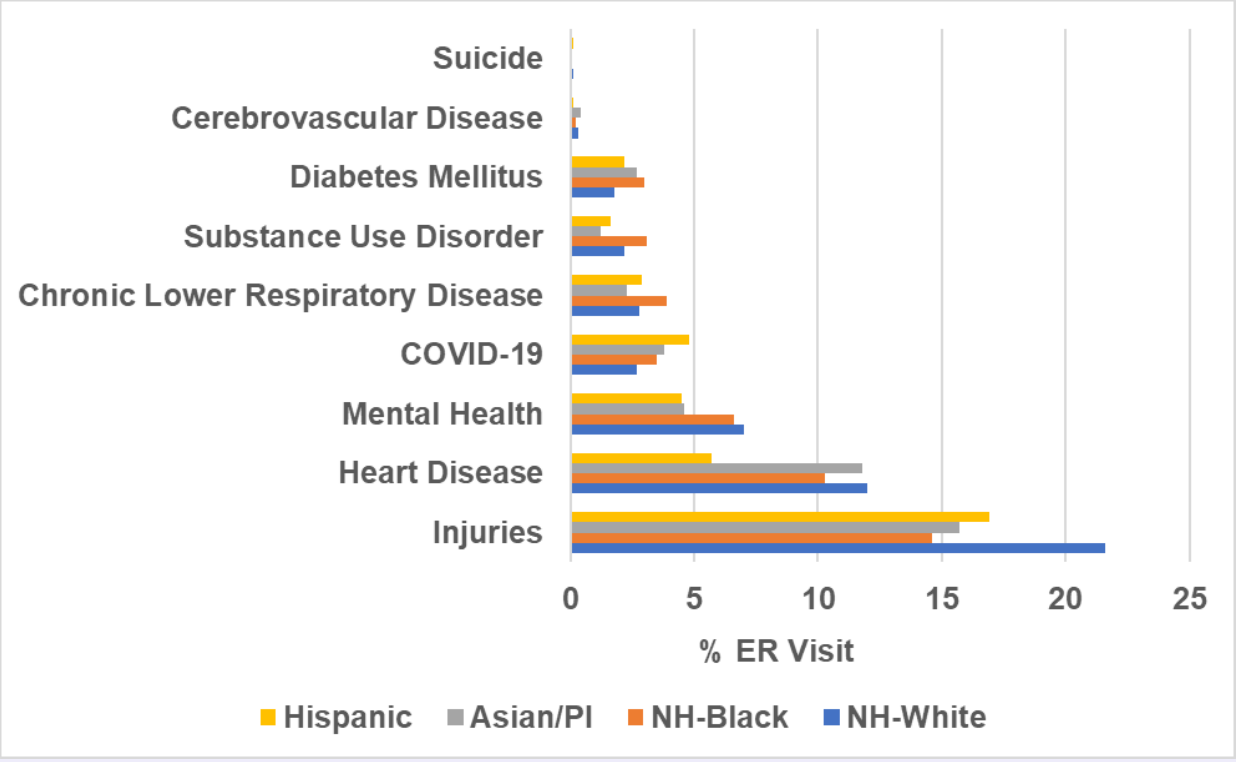
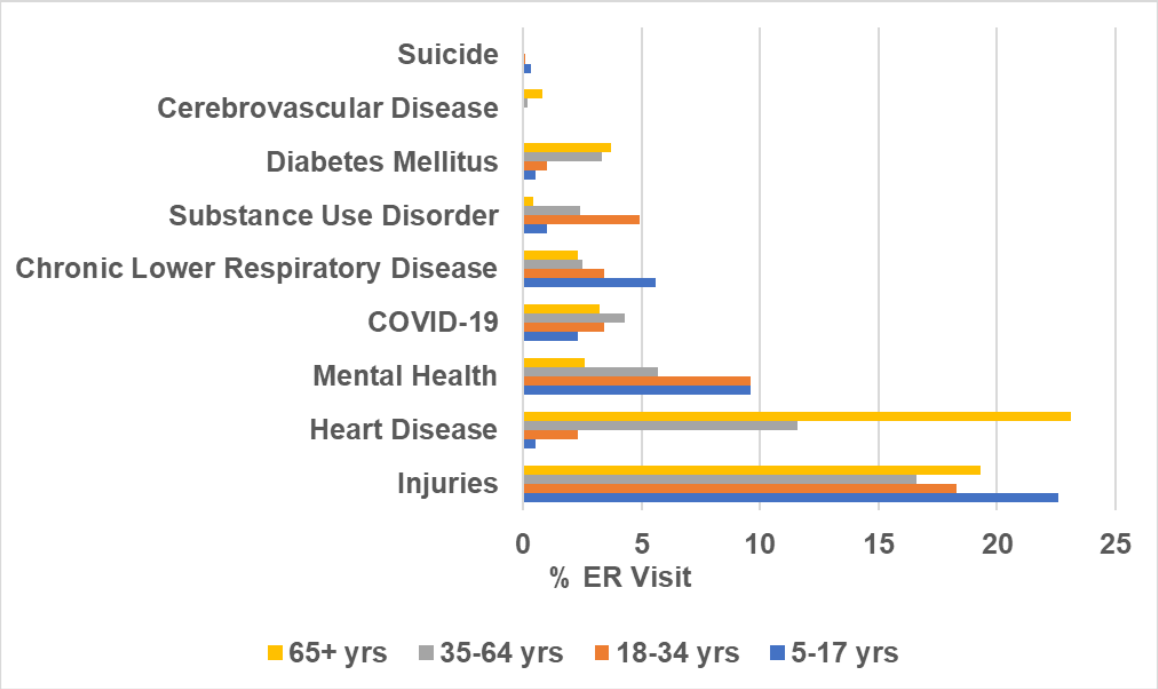


Table 12. Leading Causes of ER Visits* by Age, Montgomery County, 2020-22

	5-17 yrs		18-34 yrs		35-64 yrs		65+ yrs	
	%	Rank	%	Rank	%	Rank	%	Rank
Injuries	22.6	1	18.3	1	16.6	1	19.3	2
Heart Disease	0.5	6	2.3	6	11.6	2	23.1	1
Mental Health	9.6	2	9.6	2	5.7	3	2.6	5
COVID-19	2.3	4	3.4	4	4.3	4	3.2	4
Chronic Lower Respiratory Disease	5.6	3	3.4	5	2.5	6	2.3	6
Substance Use Disorder	1.0	5	4.9	3	2.4	7	0.4	8
Diabetes Mellitus	0.5	7	1.0	7	3.3	5	3.7	3
Cerebrovascular Disease	0.0	9	0.0	9	0.2	8	0.8	7
Suicide	0.3	8	0.1	8	0.0	9	0.0	9

*based on list of leading causes for overall population only

Figure 12. Leading Cause of ER Visits by Age, Montgomery County, 2020-22



Demographics, Social Determinants, and Health Care Access

The demographic composition of a population has a great impact on health. The population's health and health needs cannot be assessed without the insight of its size and characteristics [4]. Any changes in population size, age, race, and ethnicity affect the health-care resources needed, the cost of care provided, and the conditions associated with each population group, eventually leading to the need of alteration to current health care planning.

Risks associated with health conditions vary across population subgroups with different demographics, along with disease burden. Factors like income, education level, and area of residency can impact access to health care and may result in unequal health outcomes. Thus, it is important to examine disease burden and health status of a population by demographic factors.

Socioeconomic status (SES) is a combined total measure of an individual's economic and social position in relation to others, based on income, education, and occupation. SES is well known to be associated with the health of a population. For example, studies have found that healthcare patients of lower SES experience disparities through lesser quality and accessibility of healthcare services [5].

The combinations and interplaying relationships of demographic, SES, and health care access play a crucial role in determining the health of a population. Using such information, more adequate health planning can take place and be implemented to better support the health of our population.

Demographics

- In 2022, the County's population was over 1.05 million people (Table 13).
- The sex distribution in the County is consistent over time and similar to that of Maryland and the U.S. (Table 13).
- The County's population is aging over time; the age distribution of the County is similar to that of Maryland and the U.S. (Table 13).
- The County's population is getting more diverse over time; both the percentages of NH-Black and Hispanic populations have increased while the percentage of NH-White population is decreasing (Table 13).

Table 13. Percent Population Estimates by Selected Characteristics, Montgomery County, Maryland, and U.S., 2018-2022

		2018	2019	2020	2021	2022		
		MoCo	MoCo	MoCo	MoCo	MoCo	MD	US
Total						1,052,521		
Sex	Male	48.4	48.3	48.4	48.8	48.8	48.7	49.6
	Female	51.6	51.7	51.6	51.2	51.2	51.3	50.4
Age Group	< 5	6.3	6.2	6	5.7	5.7	5.7	5.5
	5-17	17	16.9	16.9	16.9	16.8	16.2	16.2
	18-34	20.5	20.3	20.1	20.1	19.8	21.6	23
	35-64	40.7	40.6	40.4	40.6	40.4	39.5	38.1
	65+	15.5	16.1	16.5	16.6	17.2	16.9	17.3
Race/Ethnicity	NH-White	43.4	44.2	43.7	42	40.1	47.8	57.7
	NH-Black	18.5	19.4	19.6	19	18.5	29.6	12.2
	Asian/PI	15.5	16.1	16.4	15.8	15.4	6.6	5.9
	Hispanic	19.9	20.1	20	20.1	20.3	11.4	19.1

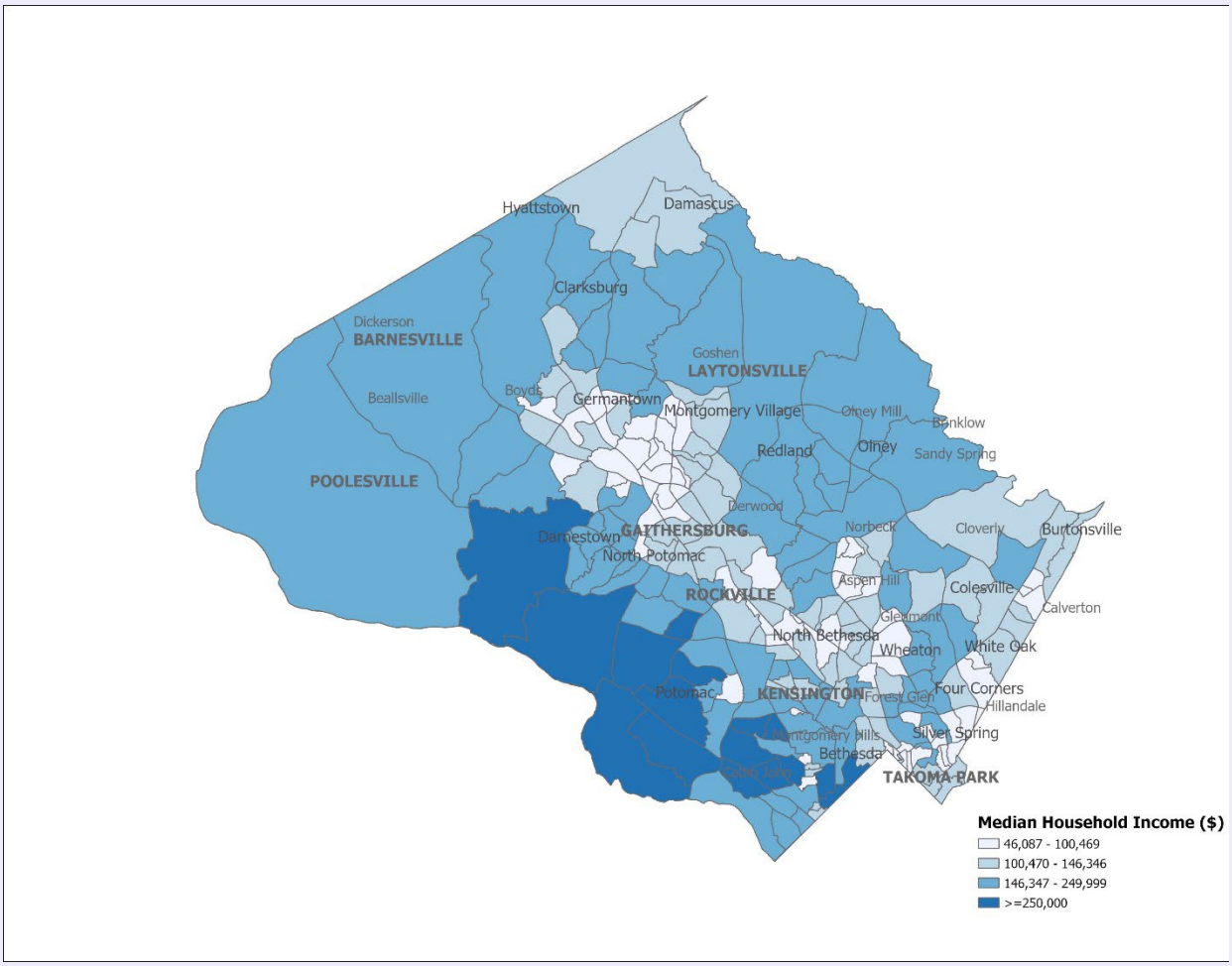
Social Determinants

- There is an increasing trend of percent families below poverty level in the County over time (Table 14).
- NH-Black and Hispanic groups have much higher percent of families living below poverty level compared to NH-White and Asian/PI (Table 14).
- The overall percent of families below poverty level in the County is lower than that in Maryland and much lower than the U.S. (Table 14).

Table 14. Percent Families below Poverty Level by Race/Ethnicity, Montgomery County, Maryland, and U.S., 2018-22

	2018	2019	2020	2021	2022		
	MoCo	MoCo	MoCo	MoCo	MoCo	MD	US
All	6.9	7.4	6.6	8.6	7.9	9.6	12.6
NH-White	3.7	3.3	3.5	4.6	3.7	6.7	9.5
NH-Black	11.1	13.6	10.4	12.8	14.3	13.2	21.3
Asian/PI	6.3	5.9	5.9	7.6	7.9	8.7	10.1
Hispanic	9.7	11.5	10	14	11.2	12.6	16.8

Map 1. Median Household Income by Census Tract, Montgomery County, 2022



- The overall unemployment rate in the County has decreased over time and is consistent across all race/ethnicity groups (Table 15).
- The unemployment rate in the County is lower than that of Maryland and the U.S. (Table 15).
- Among race/ethnicity groups, NH-Black and Hispanic groups have higher rates of unemployment than other population subgroups (Table 15).

Table 15. Unemployment Rate by Race/Ethnicity, Montgomery County, Maryland, and U.S., 2018-22

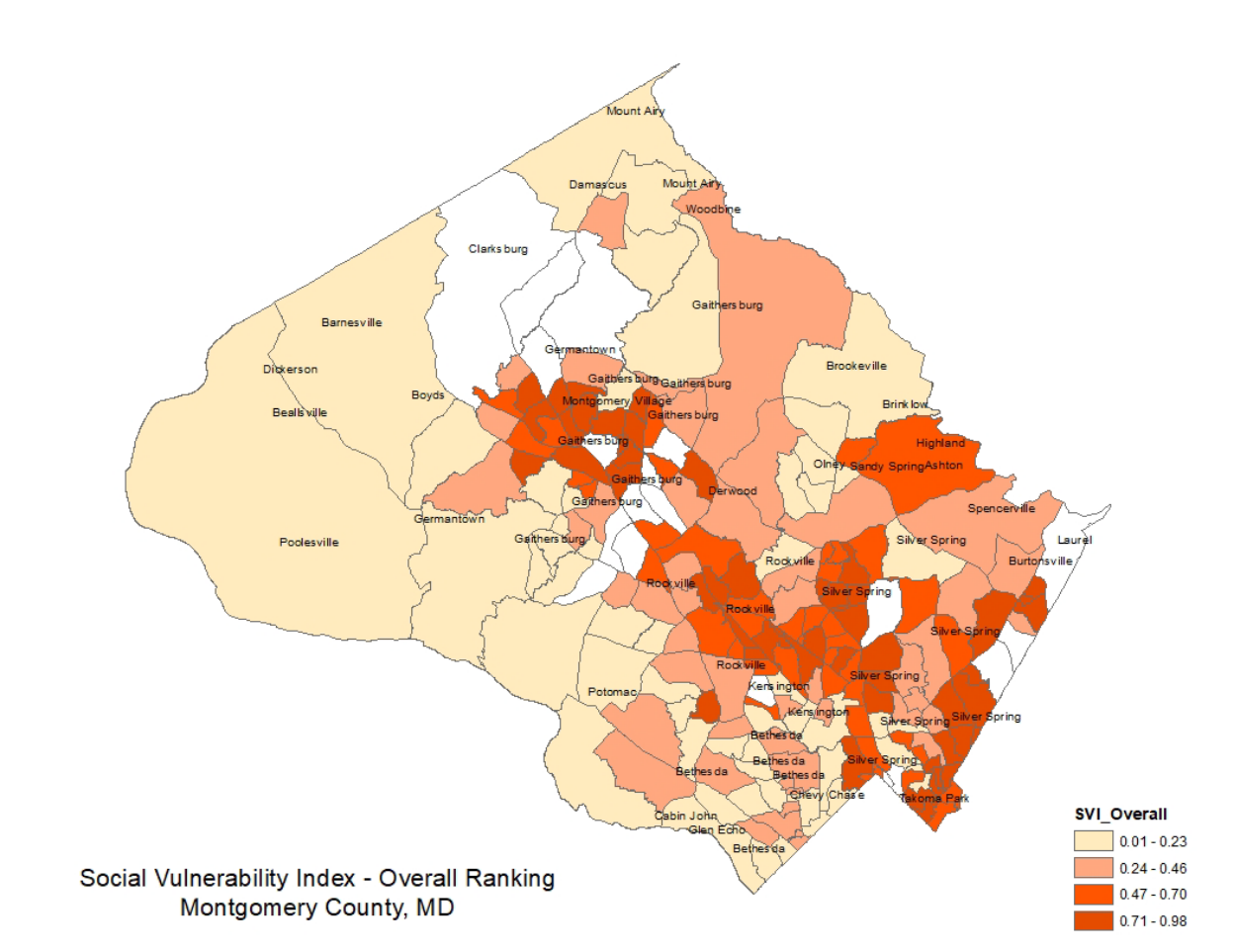
	2018	2019	2020	2021	2022		
	MoCo	MoCo	MoCo	MoCo	MoCo	MD	US
All	3.2	3.1	4.6	6.1	3.7	4	4.3
NH-White	3.2	3.1	3.2	4.2	2.5	2.8	3.3
NH-Black	6.1	7.4	7.6	10	5.9	5.9	7.6
Asian/PI	3.3	3.5	4	5.1	3.9	3.5	3.5
Hispanic	4.2	5.3	5.5	7.2	4.4	3.9	5

- The overall percent of individuals with college education or higher in the County has increased over time and is consistent across all race/ethnicity groups (Table 16).
- The percent of individuals with college education or higher in the County is much higher than that in Maryland and the US, and consistent across all race/ethnicity groups (Table 16).
- Among race/ethnicity groups, NH-White and Asian/PI groups have higher percentages of college education or higher than other population subgroups (Table 16).

Table 16. Percent Individuals with College Degree or Higher by Race/Ethnicity, Montgomery County, Maryland, and U.S., 2018-22

	2018	2019	2020	2021	2022		
	MoCo	MoCo	MoCo	MoCo	MoCo	MD	US
All	58.6	57.2	59.2	60.9	60.9	43.8	35.7
NH-White	73.1	72.5	72.8	76.4	75.7	49.4	39.5
NH-Black	44.2	44.8	45.3	47.1	47.2	34.5	25.4
Asian/PI	67.4	68.5	68.5	67.2	69.8	66.2	57.4
Hispanic	25	24.6	26.8	28	28.3	25.5	20.4

Map 2. Social Vulnerability Index by Census Tract, Montgomery County, 2020



The social vulnerability index (SVI) describes areas where communities are most socially vulnerable to disasters. The SVI uses Census data to determine the social vulnerability of every county and tract based on 15 social factors, including poverty, lack of vehicle access, and crowded housing.

Health Care Access

- The overall percentage of individuals without health insurance in the County has decreased up to 2021 but increased in 2022, similar to that in Maryland and the U.S. (Table 17).
- The percentage of individuals without health insurance in the County is higher than Maryland but lower than the U.S. (Table 17).
- Montgomery Cares program covers roughly 1.6% of uninsured residents.

Table 17. Percent Individuals without Health Insurance, Montgomery County, Maryland, and U.S., 2018-22

	2018	2019	2020	2021	2022
MoCo	6.9%	7.5%	6.8%	6.4%	7.4%
MD	6.1%	6.1%	5.9%	6.1%	6.1%
US**	8.7%	8.8%	8.7%	8.6%	8.0%

** 10th percentile

MARYLAND BRFSS Behavioral Risk Factor Surveillance System

10.6% (95% CI: 8.3-12.9) of adults age 18+ have no health insurance in Montgomery County, as compared to 8.0% (95% CI: 7.2-8.7) in Maryland.

Healthy People 2030

92.4% of population have health insurance
75% of population have dental insurance
89% of population have prescription drug insurance

- The overall Population/PCP (primary care physician) ratio in the County is consistently lower than Maryland and the U.S (Table 18).
- Population/PCP ratio fluctuates in the County, similar to Maryland, and there is an increasing trend in the U.S. (Table 18).

Table 18. Population/PCP Ratio, Montgomery County, Maryland, and U.S., 2018-22

	2018	2019	2020	2021	2022
MoCo	730	740	740	720	720
MD	1140	1140	1140	1130	1120
US*	213.8	230.4	241.9	252.3	265.3

* 90th percentile
** Source: County Health Ranking http://www.countyhealthrankings.org/;
America's Health Ranking https://www.americashealthrankings.org

83.4% (95% CI: 80.7-86.0) of adults age 18+ have a PCP in Montgomery County, as compared to 85.8% (95% CI: 84.8-86.8) in Maryland.

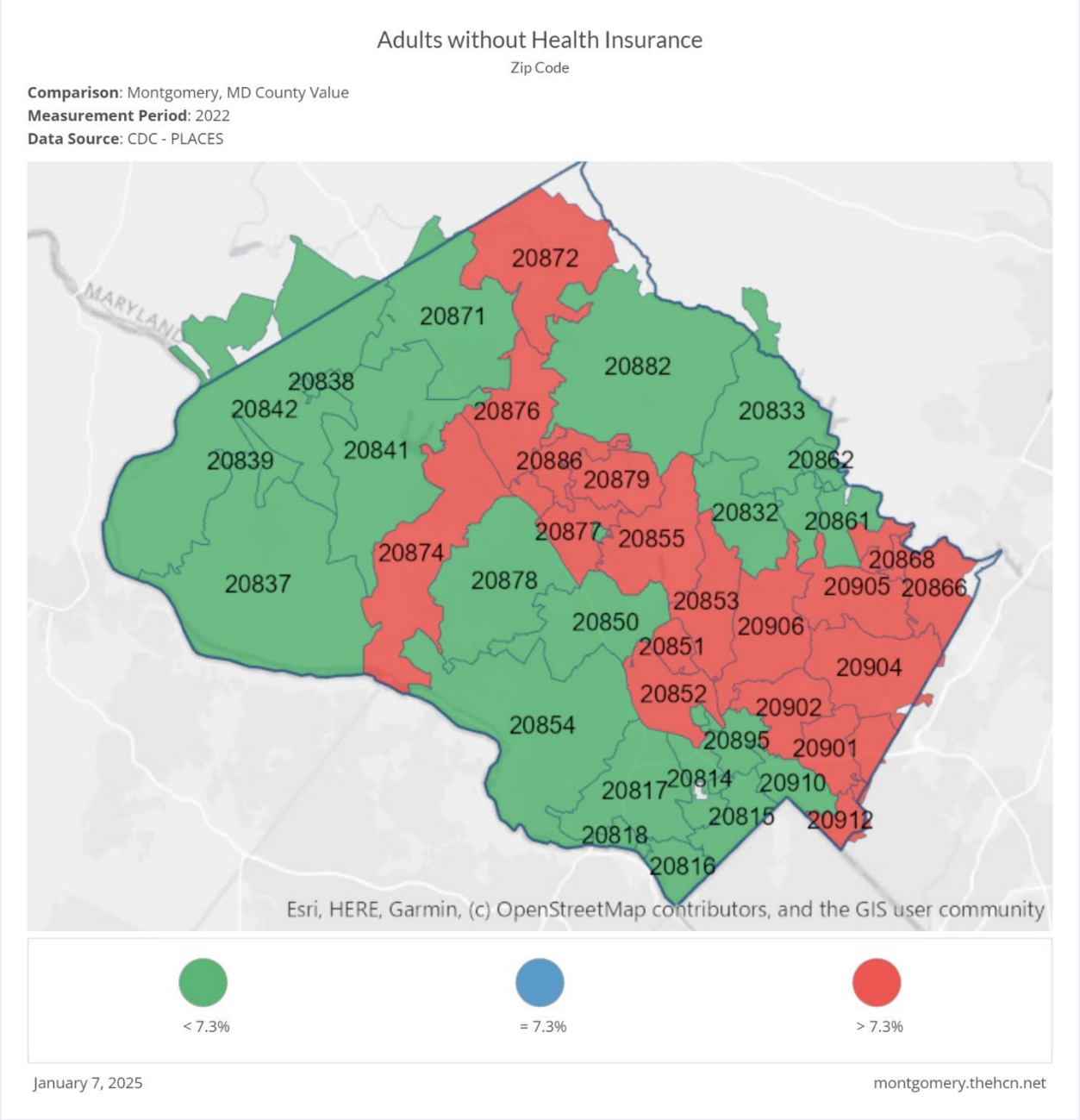
70.7% (95% CI: 67.8-73.6) of adults age 18+ visited a doctor for a routine checkup within the past year in Montgomery County, as compared to 73.4% (95% CI: 72.2 -74.5) in Maryland.

10.9% (95% CI: 8.7-13.0) of adults age 18+ are unable to see a doctor within the past year due to cost in Montgomery County, as compared to 9.3% (95% CI: 8.5-10.0) in Maryland.

70.0% (95% CI: 66.7-73.3) of adults age 18+ had a dental visit within the past year in Montgomery County, as compared to 66.7% (95% CI: 65.5-67.9) in Maryland.

84.0% of persons had a regular primary care physician

Map 3. Adults without Health Insurance, Montgomery County, 2022



Vital Statistics

Vital Statistics are fundamental to public health by providing data on birth, deaths, and other life events. Maryland Department of Health, Vital Statistics Administration collects and manages of these records, and they provide essential information about Montgomery County residents, regardless of where the birth or death occurred.

These records are used for monitoring health trends, identifying emerging health issues, and guiding public health interventions. Accurate birth and death data enable effective resource allocation to meet community health needs [6].

The 10th revision of the International Classification of Diseases (ICD-10) has been used to code the causes of death reported on death certificates since 1999. More detailed information on characteristics of births is included in the section on Maternal and Infant Health.

Births

- Montgomery County had a decreasing birth rate trend during 2013-2022, following the same trends as Maryland and the U.S. Birth rates in the County are consistently higher than those of Maryland and the U.S. up to 2017, and lower than Maryland afterwards (Figure 13).
- Among population subgroups, the Hispanic group had the highest birth rate, followed by NH-Black, and NH-White (Figure 14).
- Adolescent (15-19 yrs. old) birth rates in the County are decreasing over time, following the same trends as Maryland and the U.S. Adolescent birth rates in the County are consistently lower than those of Maryland and the U.S. (Figure 15).
- Among population subgroups, the Hispanic group had the highest adolescent birth rate, followed by NH-Black, and NH-White which is consistent with those of the general population (Figure 16).

Figure 13. Crude Birth Rate, Montgomery County, Maryland, and U.S., 2013-22

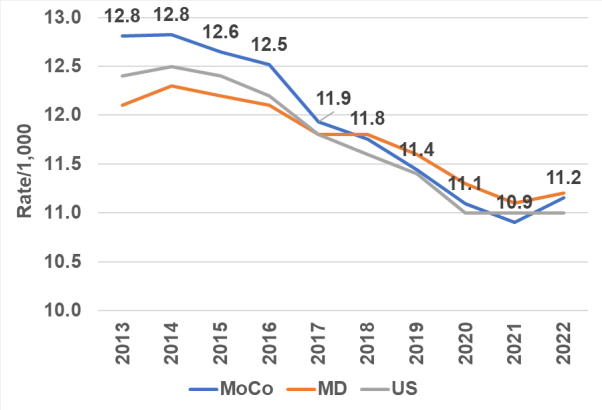


Figure 14. Birth Rate by Race/Ethnicity, Montgomery County, 2013-22

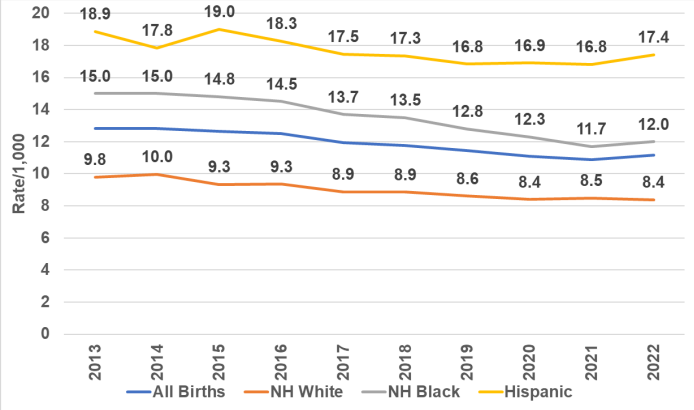


Figure 15. Adolescent Birth Rate, Montgomery County, Maryland, and U.S., 2013-22

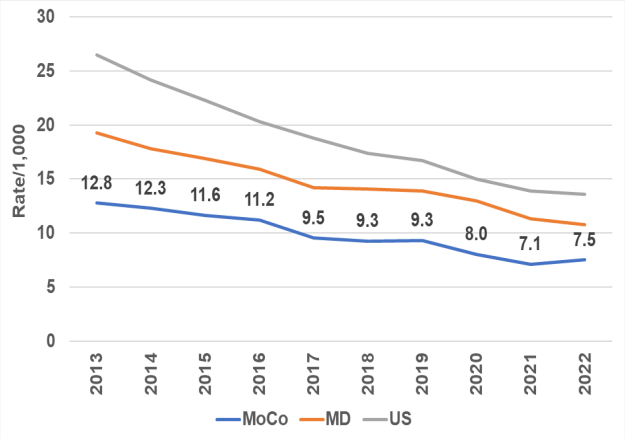
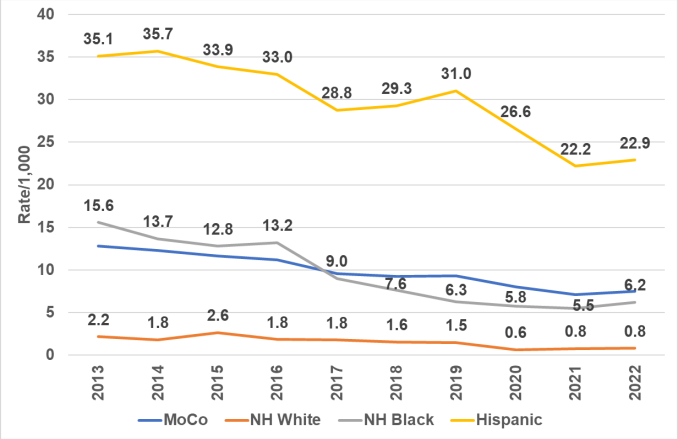


Figure 16. Adolescent Birth Rate by Race/Ethnicity, Montgomery County, 2013-22



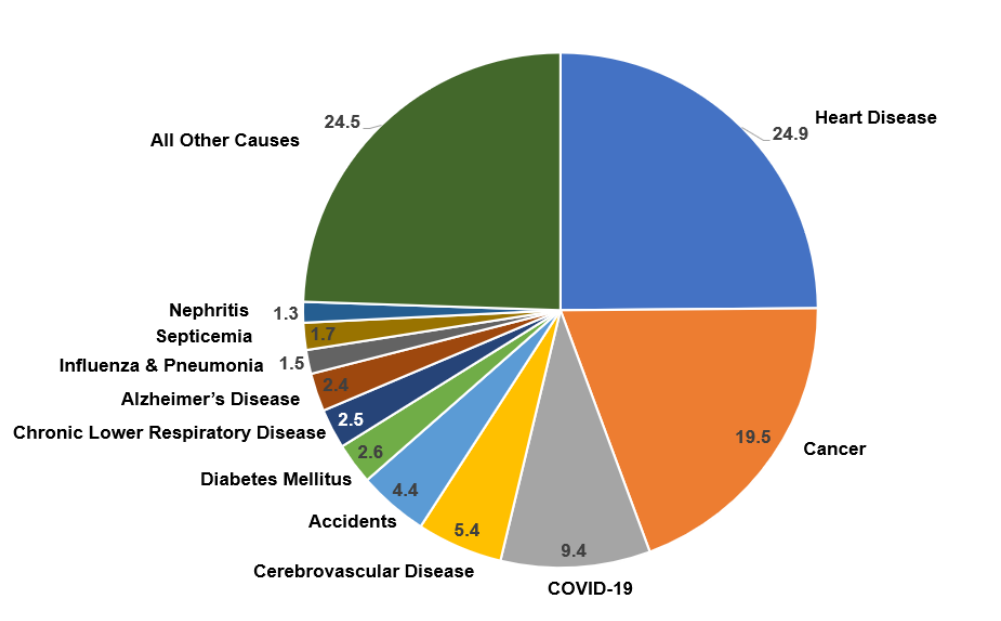
Deaths

Table 19. Leading Causes of Death by Sex and Race/Ethnicity, Montgomery County, 2020-22

	Total	Sex		Race/Ethnicity			
		Male	Female	NH-White	NH-Black	Asian /PI	Hispanic
All Causes	21,589	10,735 (50%)	10,853 (50%)	13,124 (61%)	3,856 (18%)	2,266 (10%)	2,060 (10%)
Heart Disease	5,370	2,707 (50%)	2,663 (50%)	3,438 (64%)	957 (18%)	550 (10%)	354 (7%)
Cancer	4,219	2,013 (48%)	2,206 (52%)	2,514 (60%)	745 (18%)	528 (13%)	372 (9%)
COVID-19	2,036	1,148 (56%)	888 (44%)	983 (48%)	391 (19%)	247 (12%)	404 (20%)
Cerebrovascular Disease	1,164	469 (40%)	695 (60%)	691 (59%)	198 (17%)	145 (12%)	111 (10%)
Accidents	941	572 (61%)	369 (39%)	528 (56%)	154 (16%)	87 (9%)	156 (17%)
Diabetes Mellitus	552	311 (56%)	241 (44%)	274 (50%)	139 (25%)	83 (15%)	46 (8%)
Chronic Lower Respiratory Disease	533	219 (41%)	314 (59%)	416 (78%)	61 (11%)	28 (5%)	26 (5%)

- The top leading causes of death in Montgomery County between 2020-22 include heart disease (24.9%), cancer (19.5%), COVID-19 (9.4%), cerebrovascular disease (5.4%), accidents (4.4%), diabetes mellitus (2.6%), chronic lower respiratory disease (2.5%), Alzheimer's disease (2.4%), influenza and pneumonia (1.5%), septicemia (1.7%), and nephritis (1.3%) (Figure 17).

Figure 17. Top Ten Leading Causes of Death, Montgomery County, 2020-22



- Overall mortality increased in Montgomery County following the COVID-19 pandemic, with similar trends in Maryland and the U.S. Overall mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 18).
- NH-Blacks have the highest overall mortality and Asian/PIs have the lowest; Males have higher rates compared to females (Figure 19).
- Residents aged 65 and older had the highest mortality, followed by those aged 35-64 and those aged <5 (Figure 20).

Figure 18. Age-Adjusted Mortality Rate, All Causes, Montgomery County, Maryland, and U.S., 2013-22

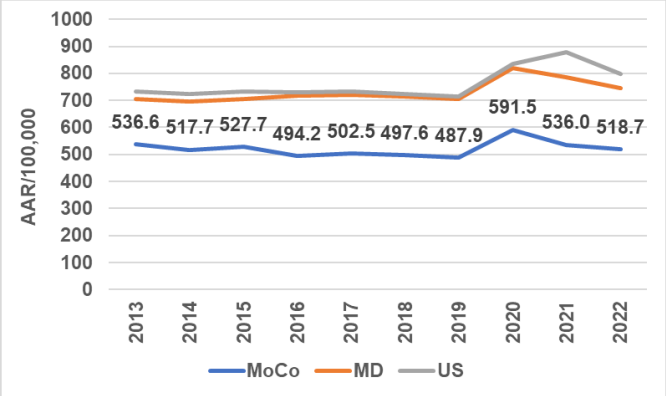


Figure 19. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, All Causes, Montgomery County

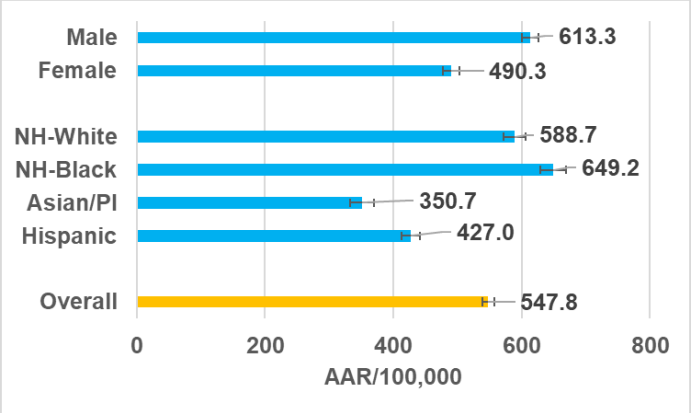
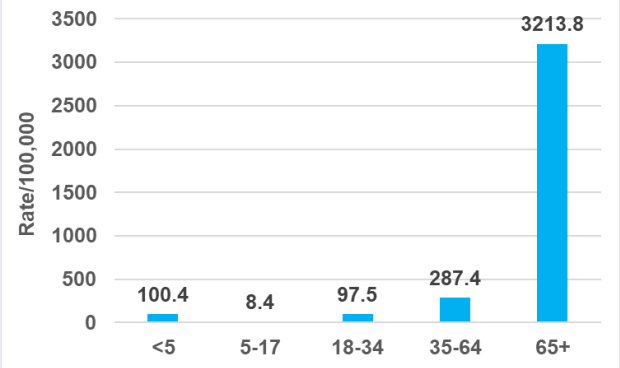


Figure 20. Mortality Rate by Age, All Causes, Montgomery County, 2020-22



- Heart disease mortality increased in Montgomery County during the COVID-19 pandemic. Heart disease mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 21).
- NH-Blacks had highest heart disease mortality and Hispanics had the lowest; males had higher heart disease mortality than females (Figure 22).
- Residents aged 65 and older had the highest heart disease mortality (Figure 23).

Figure 21. Age-Adjusted Mortality Rate, Heart Disease, Montgomery County, Maryland and U.S., 2013-22

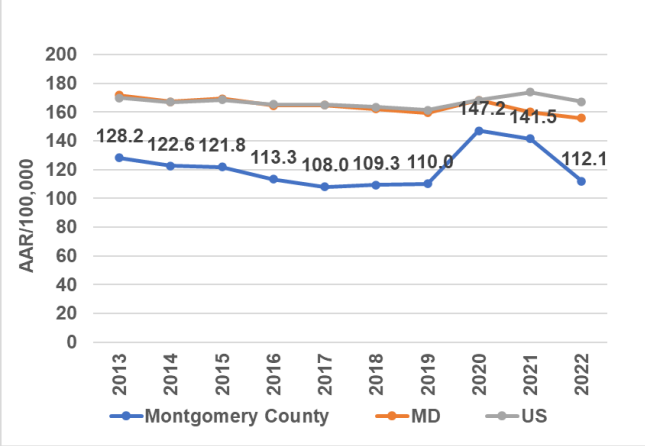


Figure 22. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, Heart Disease, Montgomery County, 2020-22

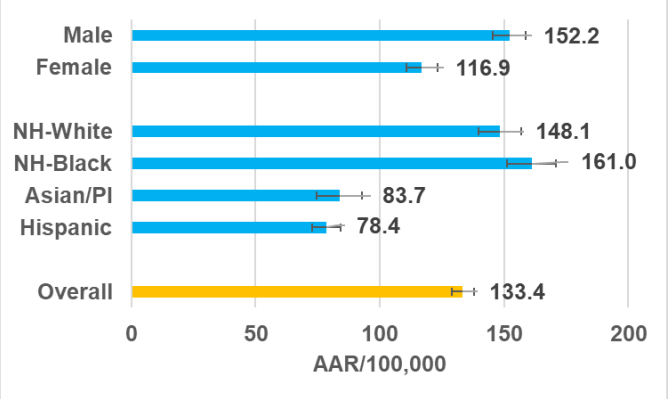
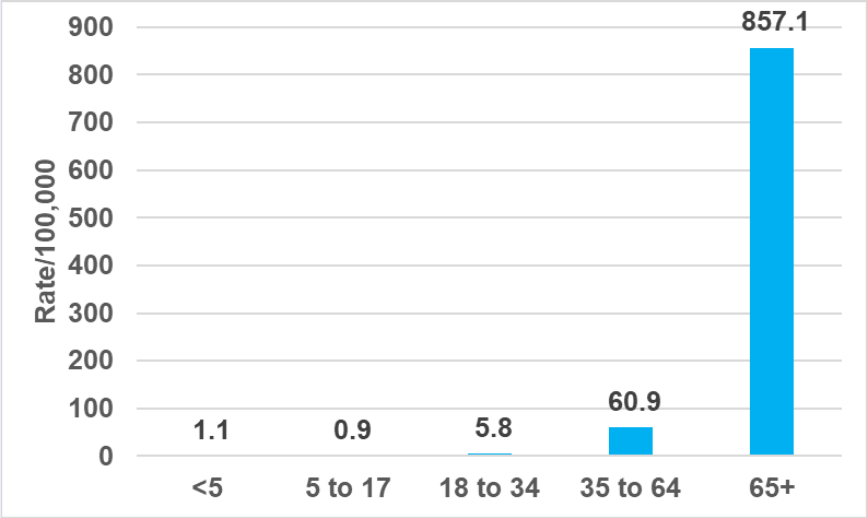


Figure 23. Mortality Rate by Age, Heart Disease, Montgomery County, 2020-22



- Montgomery County had a decreasing trend of overall cancer mortality, following the same trends of Maryland and the U.S.; cancer mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 24).
- NH-Blacks had the highest overall cancer mortality and Hispanics had the lowest; males had higher rates compared to females (Figure 25).
- Residents aged 65 and older had the highest cancer mortality, followed by those aged 35-64 (Figure 26).

Figure 24. Age-Adjusted Mortality Rate, Cancer, Montgomery County, Maryland and U.S., 2013-22

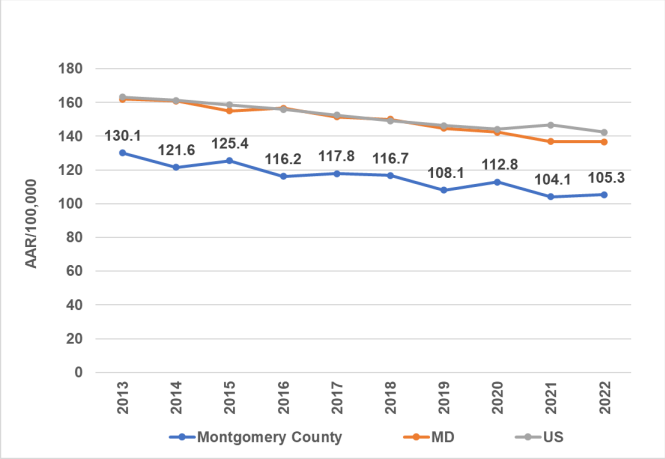


Figure 25. Age-Adjusted Mortality Rate by Sex And Race/Ethnicity, Cancer, Montgomery County, 2020-22

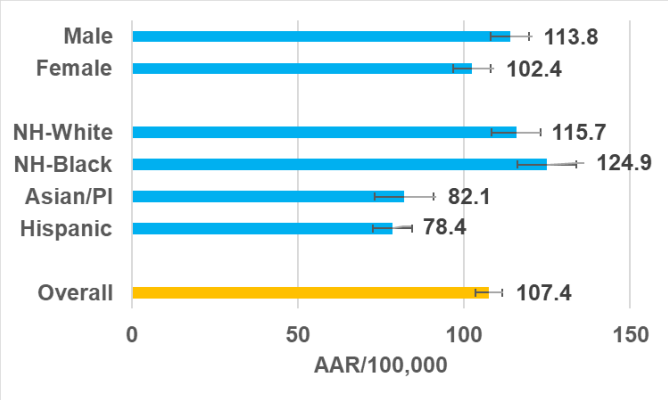
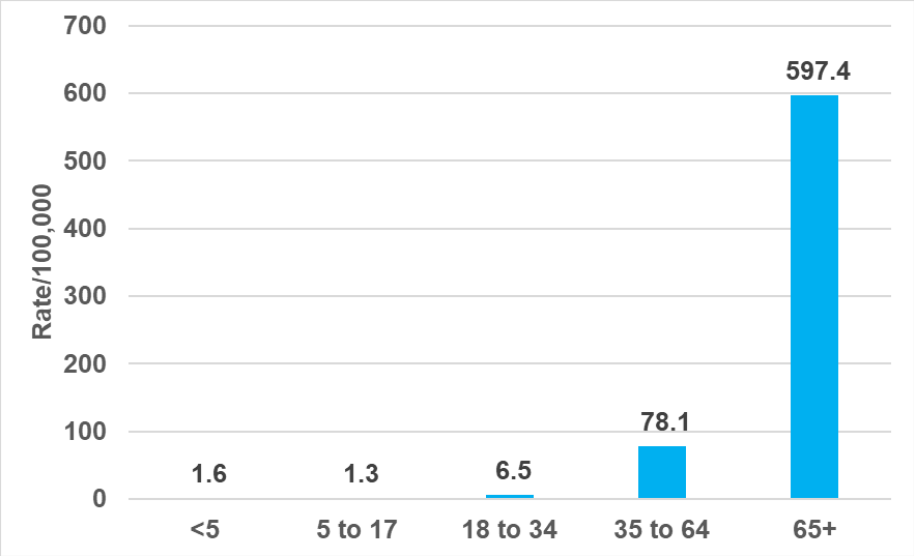


Figure 26. Mortality Rate by Age, Cancer, Montgomery County, 2020-22



- Montgomery County had a decreasing trend of cerebrovascular disease mortality up 2017 and increased since 2018, following the same trends as Maryland and the U.S.; cerebrovascular disease mortality in the County was consistently lower than that of Maryland and the U.S. (Figure 27).
- NH-Blacks had the highest cerebrovascular mortality and Asians/PI had the lowest; females had higher cerebrovascular disease mortality compared to males (Figure 28).
- Residents aged 65 and older had the highest cerebrovascular disease mortality (Figure 29).

Figure 27. Age-Adjusted Mortality Rate, Cerebrovascular Disease, Montgomery County, Maryland, and U.S., 2013-22

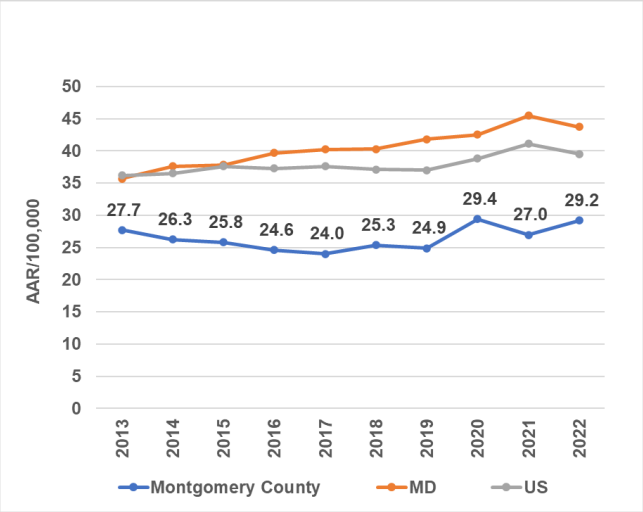


Figure 28. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, Cerebrovascular Disease, Montgomery County, 2020-22

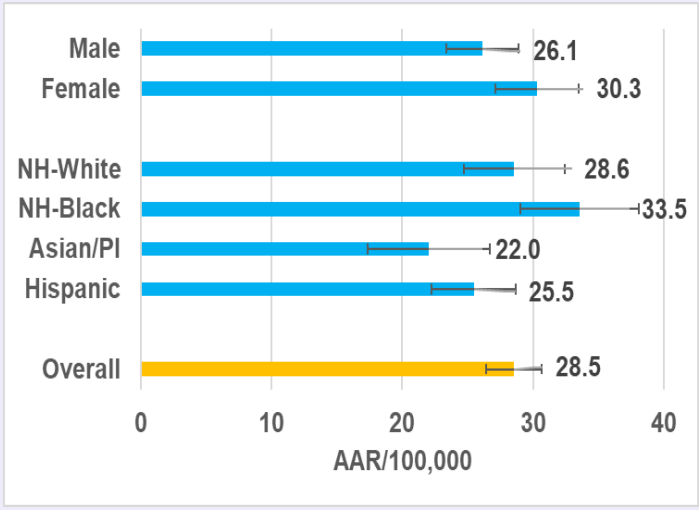
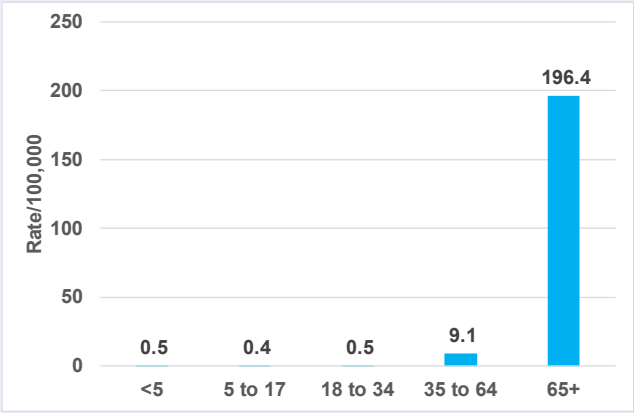


Figure 29. Mortality Rate by Age, Cerebrovascular Disease, Montgomery County, 2020-22



- Accident mortality rates in Montgomery County follow similar trends in Maryland and the U.S.; accident mortality in the County was consistently lower than that of Maryland and the U.S. (Figure 30).
- NH-Whites and Hispanics had higher accident mortality when compared with other population subgroups, even though the differences were not statistically significant; males had higher accident mortality than females (Figure 31).
- Residents aged 65 and older had the highest accident mortality, followed by aged 18-34 (Figure 32).

Figure 30. Age-Adjusted Mortality Rate, Accidents, Montgomery County, Maryland and U.S., 2013-22

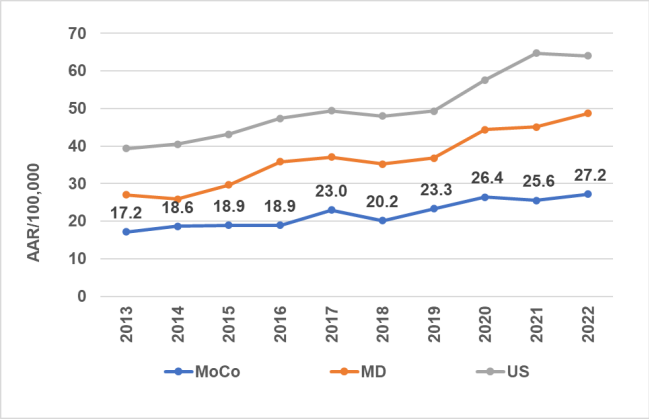


Figure 31. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, Accidents, Montgomery County, 2020-22

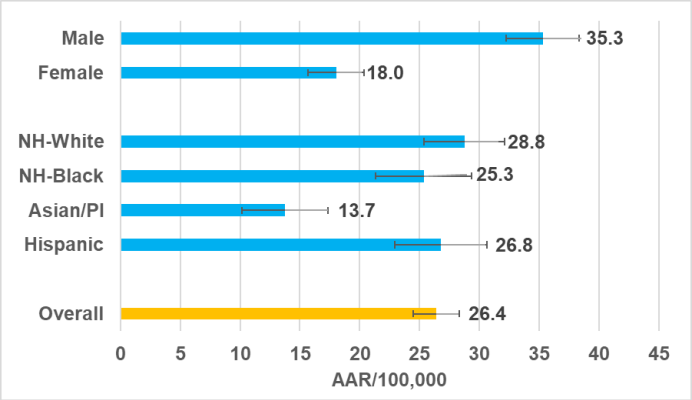
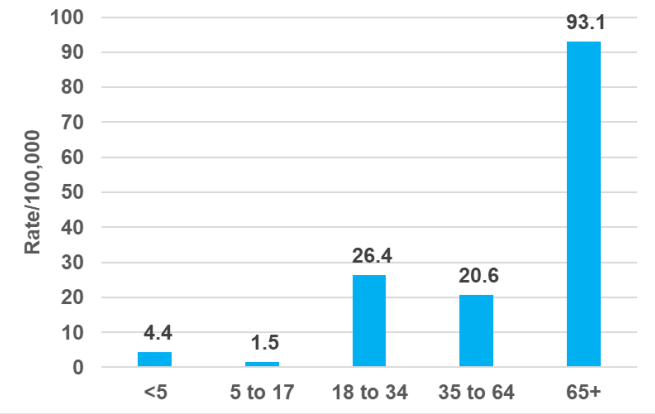


Figure 32. Mortality Rate by Age, Accidents, Montgomery County, 2020-22



- Since 2020, COVID-19 mortality in the County decreased and was consistently lower than that of Maryland and the US (Figure 33).
- Between 2020 and 2022, Hispanics and NH-Blacks had higher COVID-19 mortality than NH Whites and Asians/PI; males had higher COVID-19 mortality compared to females (Figure 34).
- Residents aged 65 and older had the highest COVID-19 mortality (Figure 35).

Figure 33. Age-Adjusted Mortality Rate, COVID-19, Montgomery County, Maryland, and U.S., 2020-22

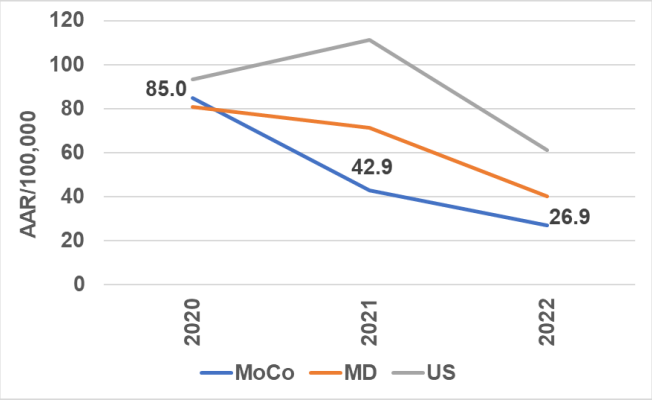


Figure 34. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, COVID-19, Montgomery County, 2020-22

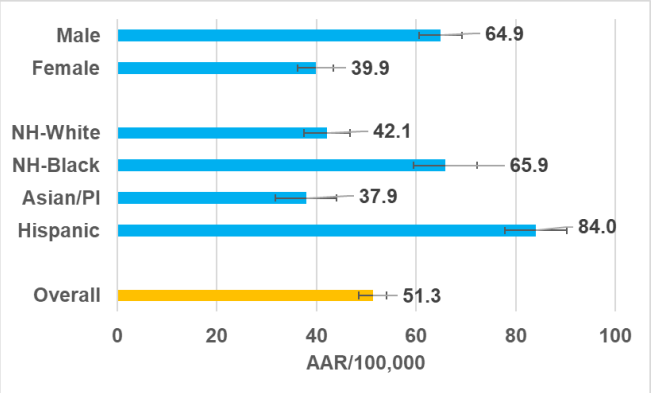
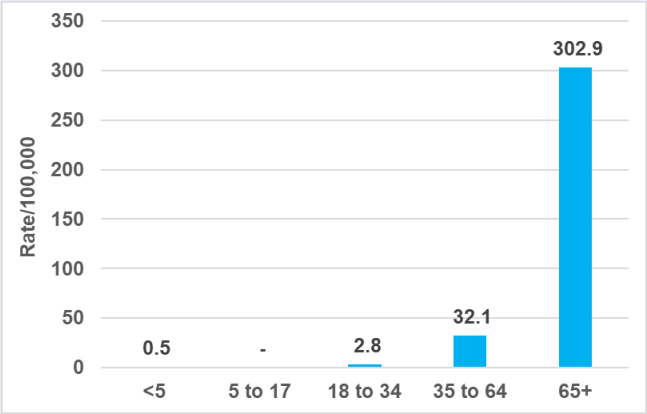


Figure 35. Mortality Rate by Age, COVID-19, Montgomery County, 2020-22



- Montgomery County had a decreasing trend of chronic lower respiratory disease mortality, with rates increasing in 2018, following the same trends as Maryland and the U.S.; chronic lower respiratory disease mortality in the County was consistently lower than that of Maryland and the U.S. (Figure 36).
- NH-Whites and NH-Blacks had higher chronic lower respiratory disease mortality compared to Hispanics and Asians/PI; females have higher chronic lower respiratory disease mortality rates than males, though the difference is not significant (Figure 37).
- Residents aged 65 and older had the highest chronic lower respiratory disease mortality (Figure 38).

Figure 36. Age-Adjusted Mortality Rate, Chronic Lower Respiratory Disease, Montgomery County, Maryland, and U.S., 2013-22

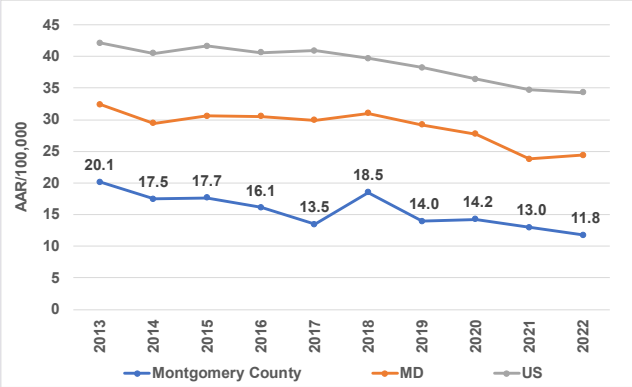


Figure 37. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, Chronic Lower Respiratory Disease, Montgomery County, 2020-22

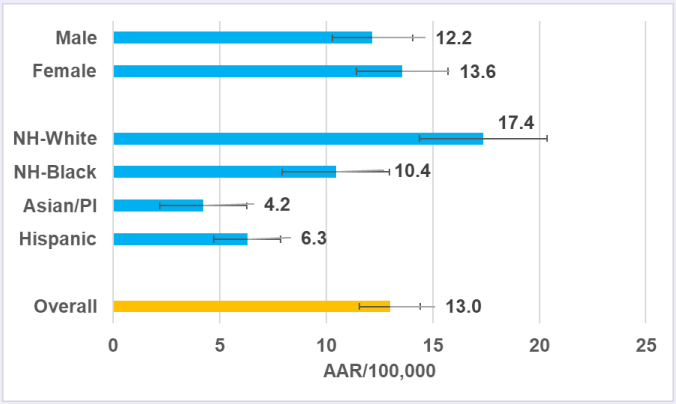
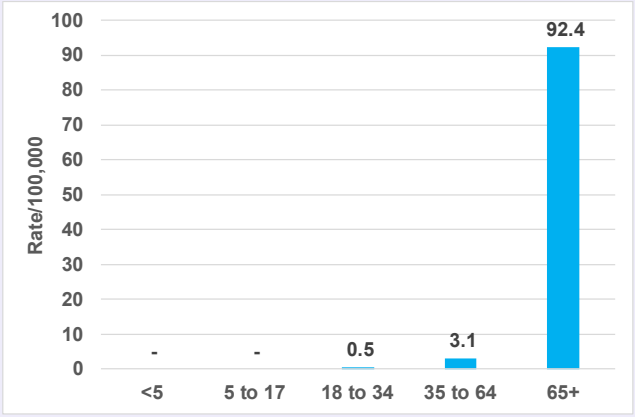


Figure 38. Mortality Rate by Age, Chronic Lower Respiratory Disease, Montgomery County, 2020-22



- Montgomery County had an overall decreasing trend of diabetes mortality up to 2018 and increased in 2019, following the same trends as Maryland and the U.S.; diabetes mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 39).
- NH-Blacks had the highest diabetes mortality when compared with other population subgroup; males had higher mortality than females (Figure 40).
- Residents aged 65 and older had the highest diabetes mortality, followed by those aged 35-64 (Figure 41).

Figure 39. Age-Adjusted Mortality Rate, Diabetes Mellitus, Montgomery County, Maryland, and U.S., 2013-22

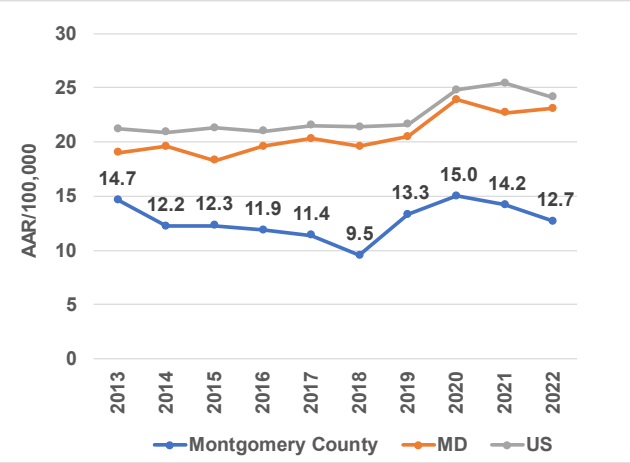


Figure 40. Age-Adjusted Mortality Rate by Sex and Race/Ethnicity, Diabetes Mellitus, Montgomery County, 2020-22

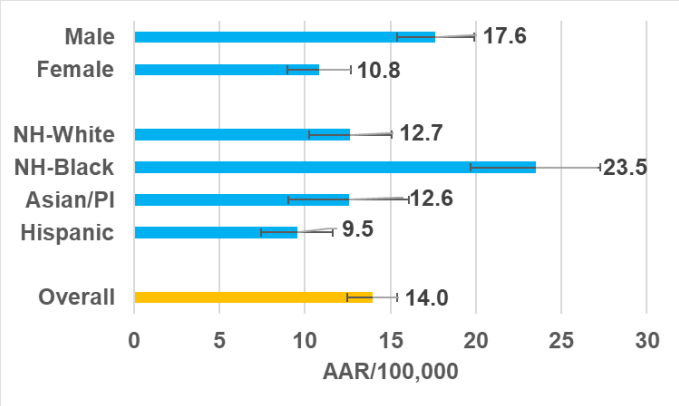
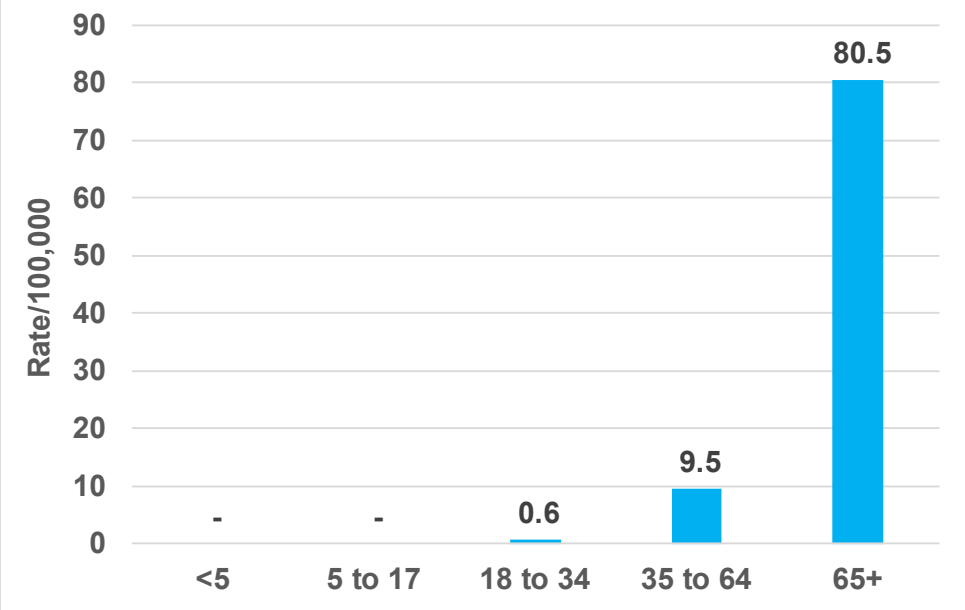


Figure 41. Mortality Rate by Age, Diabetes Mellitus, Montgomery County, 2020-22



Maternal and Infant Health

The well-being of mothers, infants, and children is a key determinant of public health by serving as a predictor of the next generation's health outcomes. It builds the base for the long-term health trends and helps to identify future public health challenges that may affect families, communities, and health care system.

Maternal health, including pre-pregnancy health conditions, is important in determining the health of both mother and children. Identifying and addressing health risks in women can prevent complications during pregnancy and reduce long-term health risks for mothers and children [7].

The determinants that influence maternal health also affect pregnancy outcomes and infant and child health. Racial and ethnic disparities exist in infant mortality and can be partly attributed to disparities in social determinants of health [8-11]. Child health status varies by both race and ethnicity, as well as by family income and related factors, including educational attainment among household members and health insurance coverage [12-14].

Child health status and well-being can also be influenced by access to high-quality health care, such as that received through a medical home and maternity care practices that promote breastfeeding and safe sleep environments [15-18].

A mother's health, nutrition, and behaviors can influence cognitive and physical development of infants and children during pregnancy and early childhood. Consumption of recommended amounts of folic acid before and during pregnancy can reduce the risk for neural tube defects [19-20]. Breast milk is widely acknowledged to be the most complete form of nutrition for most infants, with a range of benefits for their health, growth, immunity, and development [21].

Furthermore, children reared in safe and nurturing families and neighborhoods, free from maltreatment and other adverse childhood experiences, are more likely to have better outcomes as adults [22-24].

- Montgomery County had an increasing trend of the percentage of women ages 35-44 giving birth, following the same trends as Maryland; the percentage of women ages 35-44 giving birth in the County is consistently higher than that of Maryland (Figure 42).
- Among population subgroups, NH-Whites had a higher percentage of births among women ages 35-44, followed by Asian/PI and NH-Black (Figure 43).

Figure 42. Percent Births among Women Ages 35-44, Montgomery County and Maryland, 2013-22

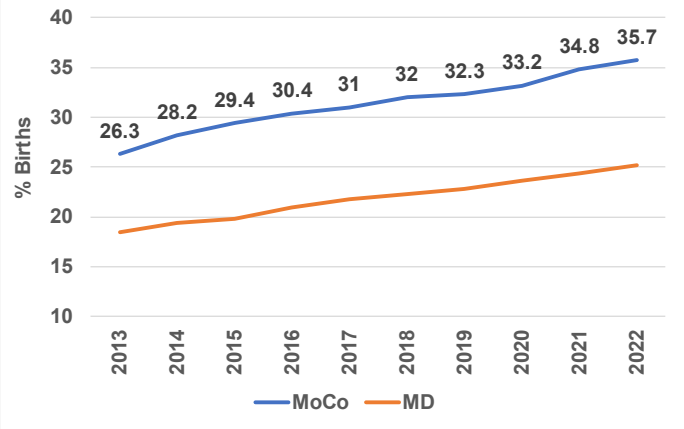
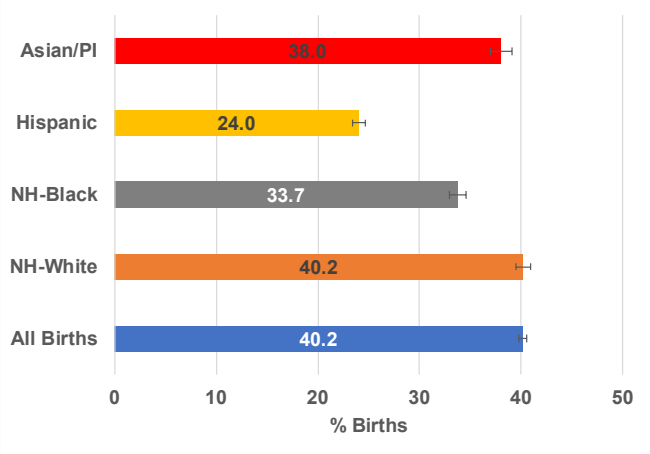


Figure 43. Percent Births among Women Ages 35-44 by Race/Ethnicity, Montgomery County, 2018-22



- The percentage of births to unmarried women increased over time in Montgomery County. The percentage of births to unmarried women in the County is consistently lower than that of Maryland and U.S. up until 2020 (Figure 44).
- Among population subgroups, the Hispanic group had the highest percentage of births to unmarried women, followed by NH-Black, NH-White and Asian (Figure 45).
- The percentage of births to women without a high school education in the County

Figure 44. Percent Births to Unmarried Women, Montgomery County, Maryland, and U.S., 2013-22

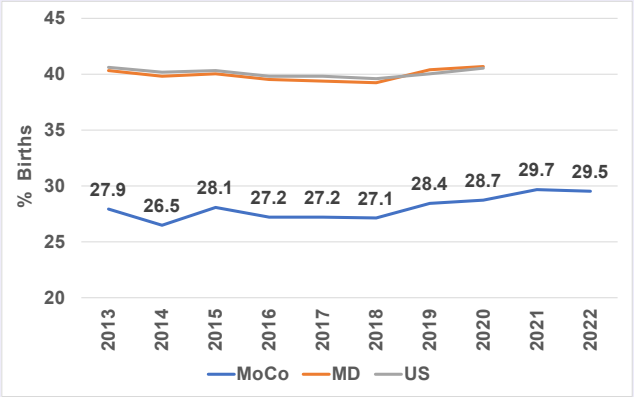
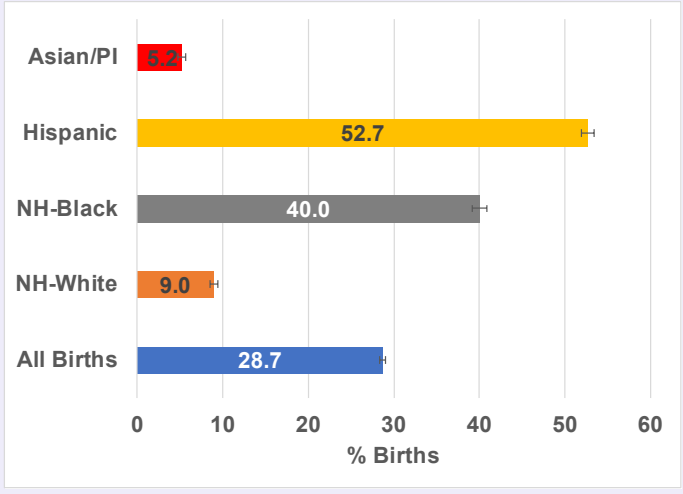


Figure 45. Percent Births to Unmarried Women by Race/Ethnicity, Montgomery County, 2018-22



fluctuated between 2013 and 2022, with an increasing trend overall. Since 2020, the county has a slightly higher percentage compared to that of Maryland (Figure 46).

- Among population subgroups, Hispanics had the highest percentage of births to women without a high school education, followed by NH-Black, Asian/PI, and NH-White (Figure 47).

Figure 46. Percent Births to Women without High School Education, Montgomery County and Maryland, 2013-22

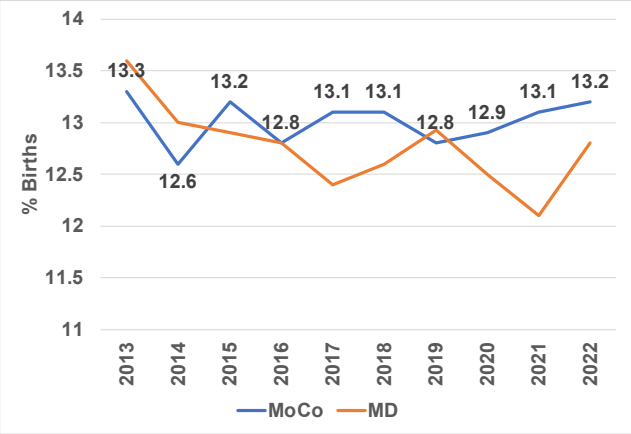
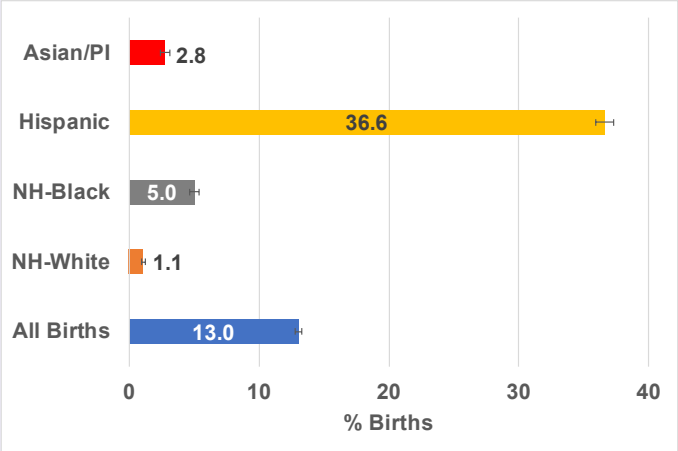


Figure 47. Percent Births to Women without High School Education by Race/Ethnicity, Montgomery County, 2018-22



- Montgomery County had an overall decreasing trend of the percentage of plural births, followed the same trend in Maryland; the percentage of plural births in the County has been consistently higher than that of Maryland until 2016 (Figure 48).
- Among population subgroups, NH-Black and NH-White groups had a higher percentage of plural births, followed by Asian/PI and Hispanic groups (Figure 49).

Figure 48. Percent Plurality Births, Montgomery County and Maryland, 2013-22

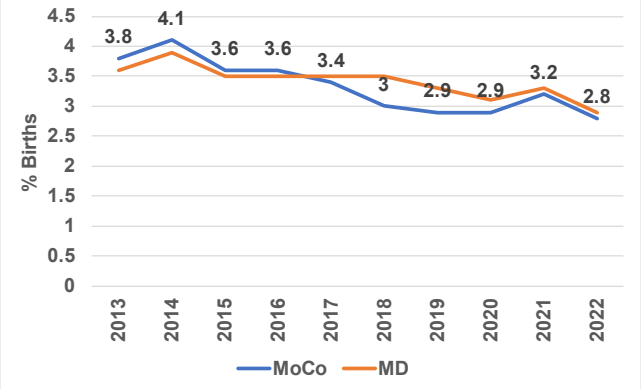
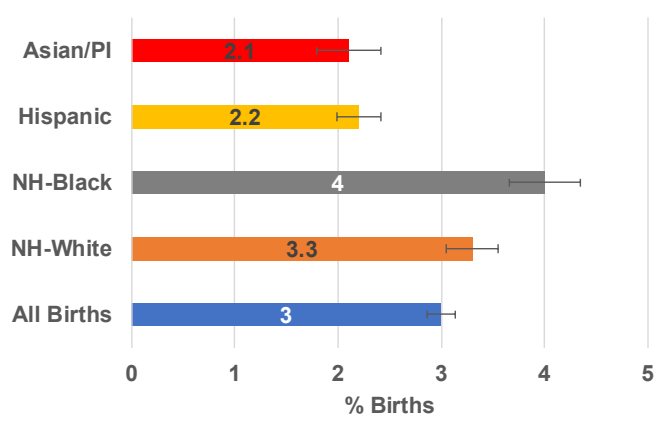


Figure 49. Percent Plurality Births by Race/Ethnicity, Montgomery County, 2018-22



- The percentage of births with late or no prenatal care in the county fluctuated between 2013 and 2022; the percentage of births with late or no prenatal care in the County has been consistently lower than that of Maryland up until 2020 (Figure 50).

- Among population subgroups, the NH-Black group had the highest percentage of births with late or no prenatal care, followed by Hispanic, Asian/PI, and NH-White (Figure 51).

Figure 50. Percent Birth with Late or No Prenatal Care, Montgomery County and Maryland, 2013-22

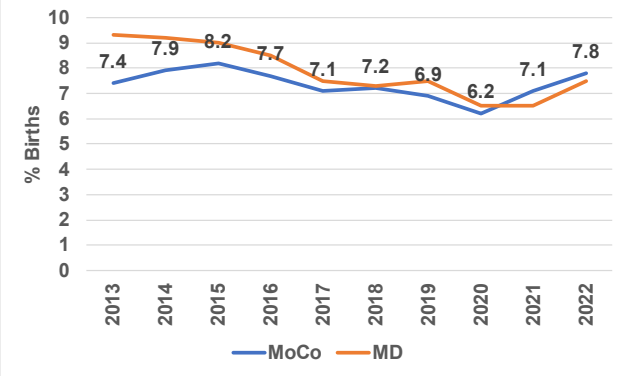
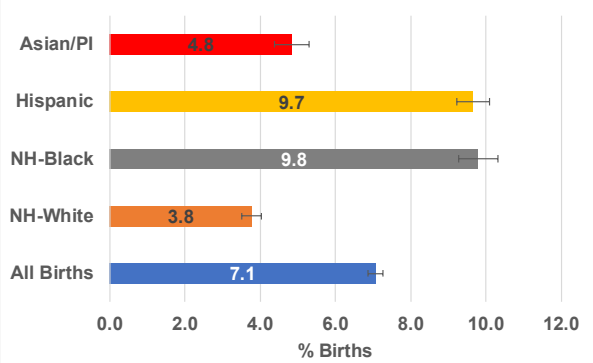


Figure 51. Percent Birth with Late or No Prenatal care by Race/Ethnicity, 2018-22



healthy montgomery 2030

4.8%

Health inequity (NH-Whites as reference) increased over time for NH-Blacks and Hispanics

- Montgomery County had an overall decreasing trend of tobacco use during pregnancy, though this information collected from birth records may be underreported (Figure 52).
- Among population subgroups, NH-Black and NH-White had higher tobacco use during pregnancy, followed by Hispanic and Asian/PI (Figure 53).

Figure 52. Tobacco Use during Pregnancy, Montgomery County, 2013-22

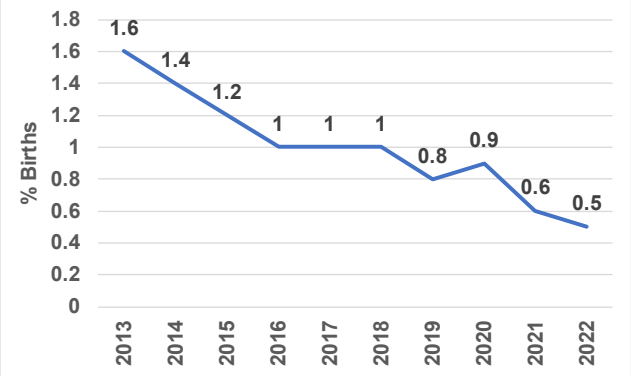
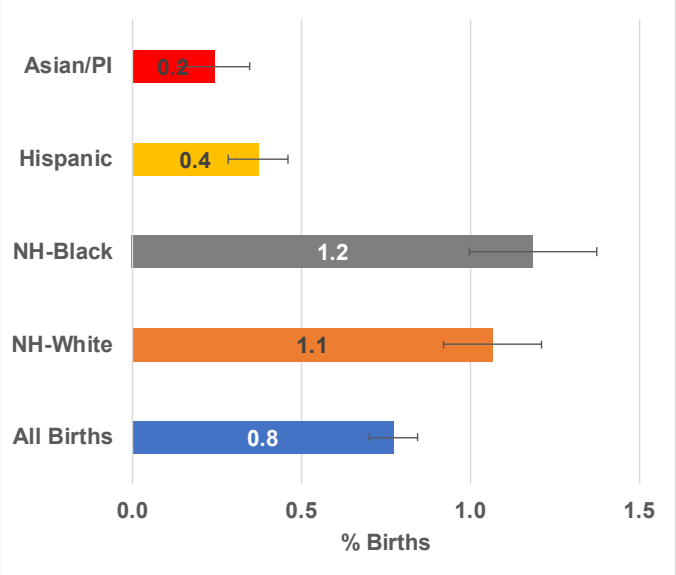


Figure 53. Tobacco Use during Pregnancy by Race/Ethnicity, Montgomery County, 2018-22

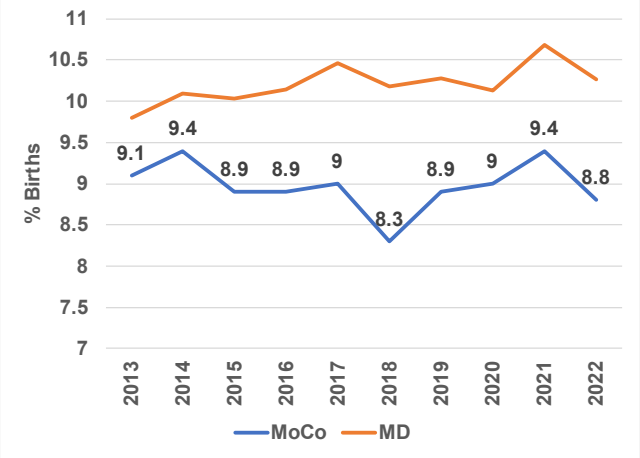


10.6% (95% CI: 8.3-13.4) of mothers in Maryland reported smoking during the 3 months prior to pregnancy (2020)

4.0% (95% CI: 2.7-5.8) of mothers in Maryland reported smoking during the last three months of pregnancy (2020)

- The percentage of preterm births fluctuated over time in Montgomery County; preterm births in the County is consistently lower than that of Maryland (Figure 54).
- Among population subgroups, NH-Blacks had the highest percentage of preterm births than other groups (Figure 55).

Figure 54. Percent Preterm Births, Montgomery County and Maryland, 2013-22



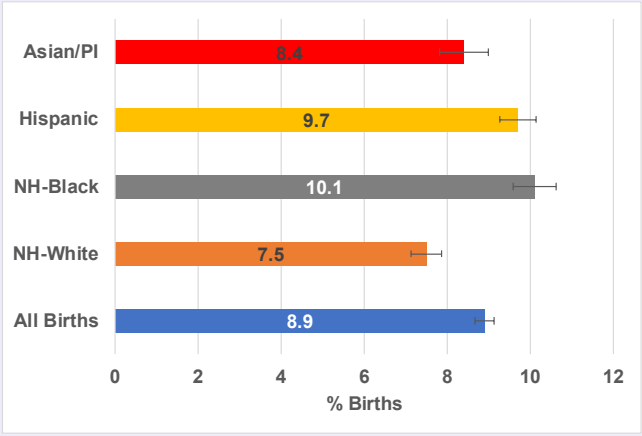
healthy montgomery 2030

9.1%

Healthy People 2030

9.4% of live births are preterm

Figure 55. Percent Preterm Births by Race/Ethnicity, Montgomery County, 2018-22



Health inequity (NH-Whites as reference) increased over time for Hispanics

- The trend of low weight births in Montgomery County over time is similar to that of Maryland and the U.S.; low weight births in the County have been consistently lower than that of Maryland and the U.S. (Figure 56).
- Among population subgroups, NH-Blacks has the highest percentage of low weight births than other groups, and NH-Whites has the lowest percentage (Figure 57).

Figure 56. Percent Low Weight Births Montgomery County, Maryland, and U.S., 2013-22

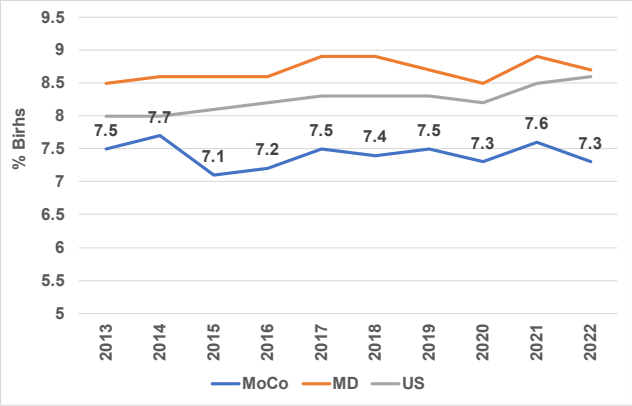
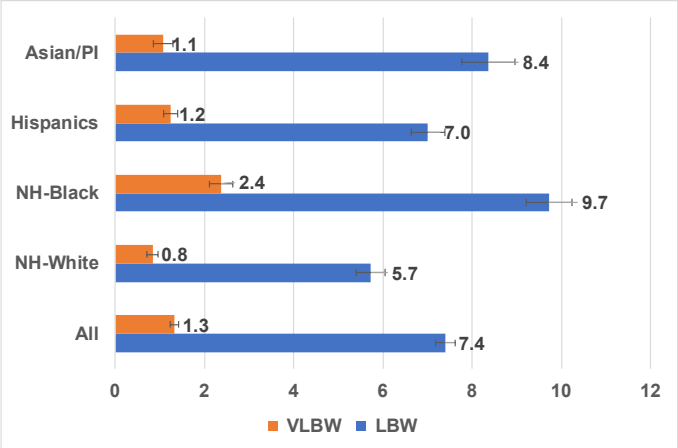


Figure 57. Percent Low and Very Low Weight Births by Race/Ethnicity, Montgomery County, 2018-22



- Infant mortality rates in Montgomery County fluctuated over time; the trend of infant mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 58).
- Among population subgroups, NH-Black had the highest infant mortality rate, followed by Hispanic, and NH-White (Figure 59).

Figure 58. Infant Mortality Rate, Montgomery County, Maryland, and U.S., 2013-22

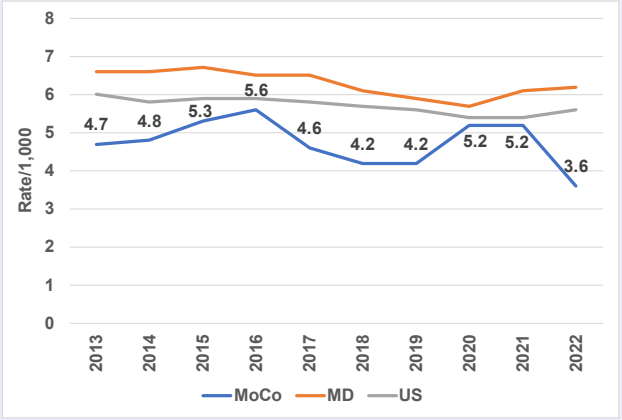
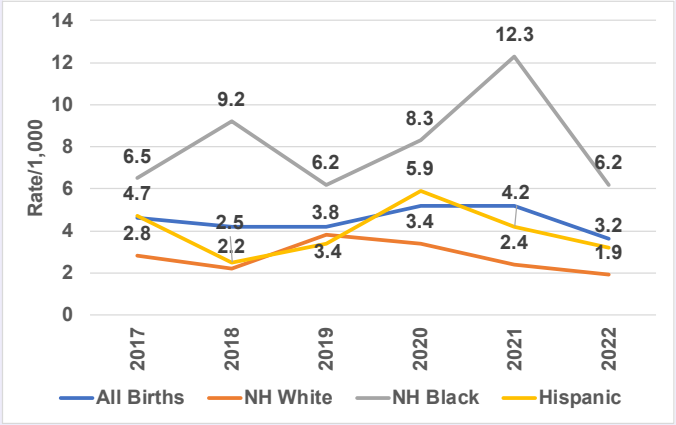


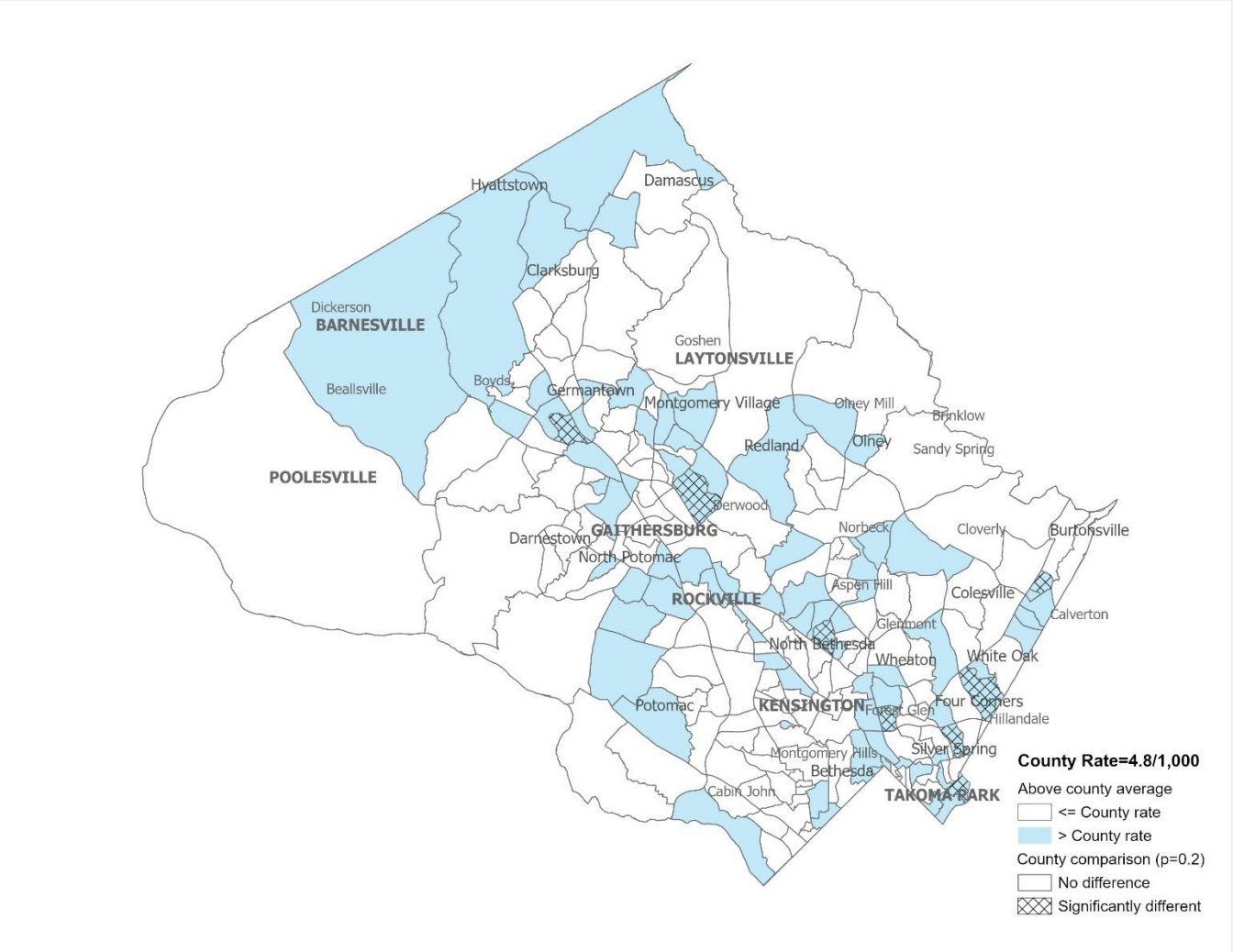
Figure 59. Infant Mortality Rate by Race/Ethnicity, Montgomery County, 2017-22



4.9/1,000 births

Health inequity (NH-Whites as reference) increased over time for NH-Blacks and Hispanics

Map 4. Infant Mortality Rate by Census Tract, Montgomery County, 2020-22



Chronic Disease

Chronic diseases are long-term health conditions that persists for 3 months or more and require ongoing medical attention and treatment. They are the leading cause of death worldwide. Common chronic diseases include cardiovascular diseases, diabetes, stroke, chronic respiratory diseases, and cancer. According to the World Health Organization (WHO), chronic diseases are responsible for 75% of non-pandemic-related deaths globally [25].

Chronic diseases are influenced by a combination of genetic, environmental, and lifestyle factors, such as unhealthy diets, physical inactivity, tobacco use, and excessive alcohol consumption [25]. Disparities in social determinants of health, such as education, income, and access to healthcare are related to the lifestyle factors that may lead to such conditions. For example, individuals of lower socioeconomic status encounter higher rates of chronic diseases due to limited access to healthcare and nutritious food options [26-27]. Lack of access and delay in receiving care result in worse outcomes for patients from minorities and underserved populations [28]. Those barriers to medical care complicate patients monitoring and continuity in treatment.

Chronic diseases are still preventable and manageable through early detection, interventions, and lifestyle changes. Behavioral changes, such as quitting smoking, adopting a healthy diet, and increasing physical activity, promote improved health outcomes and decreased chance of these conditions [29-30].

Addressing the current standing of chronic diseases in our population is crucial for reducing healthcare costs, planning proper interventions, and improving population health and overall well-being.

Cardiovascular Disease

Cardiovascular disease is a growing concern in the U.S. Heart disease is the nation's leading cause of death. Three health-related behaviors--tobacco use, lack of physical activity, and poor nutrition--contribute markedly to increased risk of heart disease. Modifying these behaviors is critical for both preventing and controlling heart disease. Modest changes in one or more of these risk factors among the population could have a profound public health impact.

62.8% (95% CI: 56.1-69.6) adults age 18+ are overweight or obese in Montgomery County, as compared to 68.7% (95% CI: 66.1-71.3) in Maryland

5.5% (95% CI: 4.1-6.8) adults age 18+ are current smokers in Montgomery County, as compared to 10.1% (95% CI: 9.3-10.9) in Maryland

67.9% (95% CI: 64.5-71.4) adults age 18+ have daily fruit consumption in Montgomery County, as compared to 62.5% (95% CI: 61.1-63.8) in Maryland

83.0% (95% CI: 80.3-85.7) adults age 18+ have daily vegetable consumption in Montgomery County, as compared to 80.4% (95% CI: 79.3-81.6) in Maryland

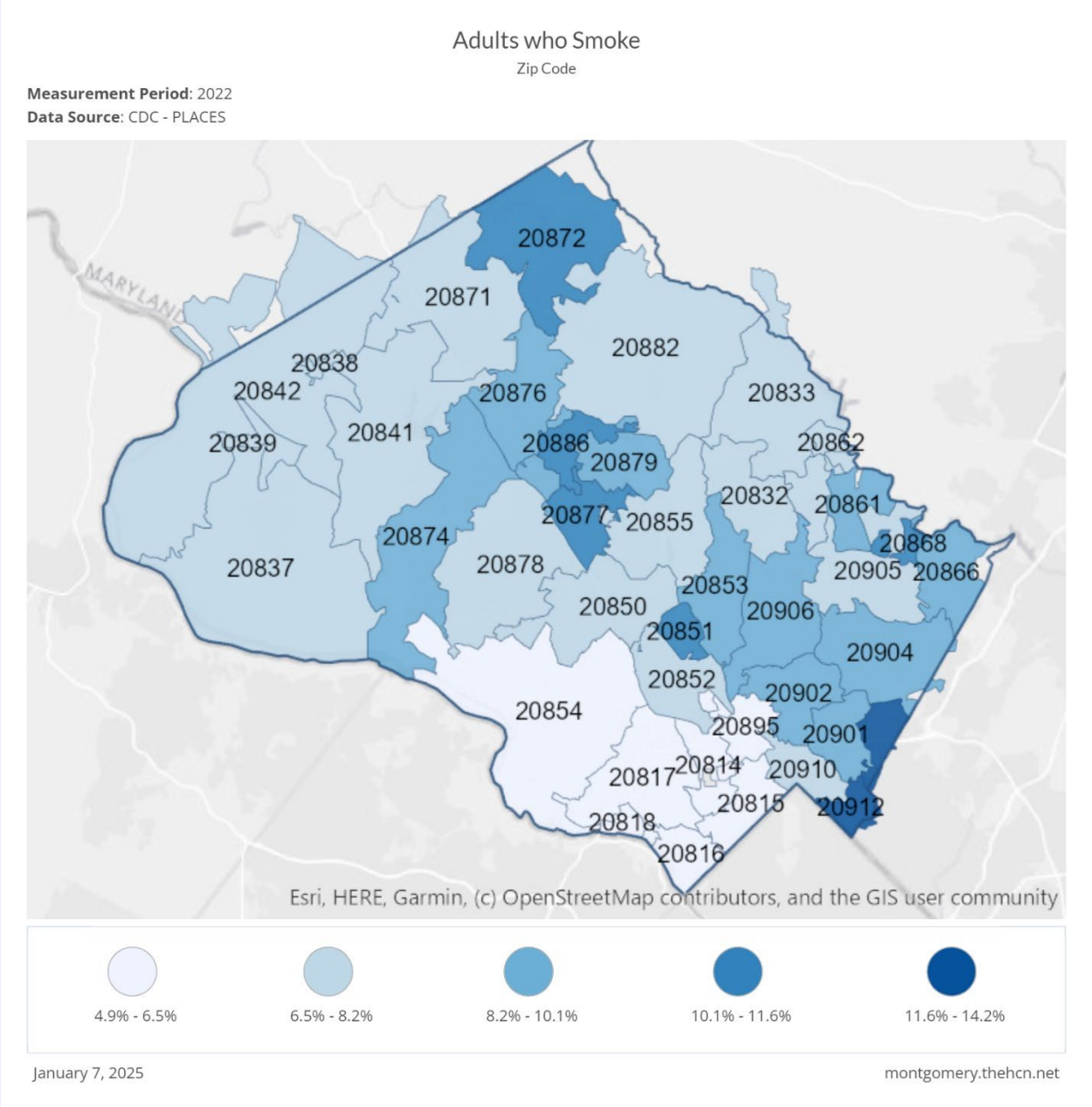
17.6% (95% CI: 15.0-20.2) adults age 18+ have no leisure time physical activity in Montgomery County, as compared to 21.2% (95% CI: 20.2-22.2) in Maryland

26.5% (95% CI: 23.9-29) adults age 18+ have ever been told they have hypertension in Montgomery County, as compared to 32.0% (95% CI: 31.0-33.0) in Maryland

39.6% (95% CI: 36.2-43.0) adults age 18+ have ever been told they have high cholesterol in Montgomery County, as compared to 33.5% (95% CI: 32.3-34.6) in Maryland

56.4% adults age 18+ are overweight or obese
22.7% adults 18+ have high blood pressure

Map 5. Adults Who Smoke by Zip Code, Montgomery County, 2022



Map 6. Prevalence of High Blood Pressure by Zip Code, Montgomery County, 2021

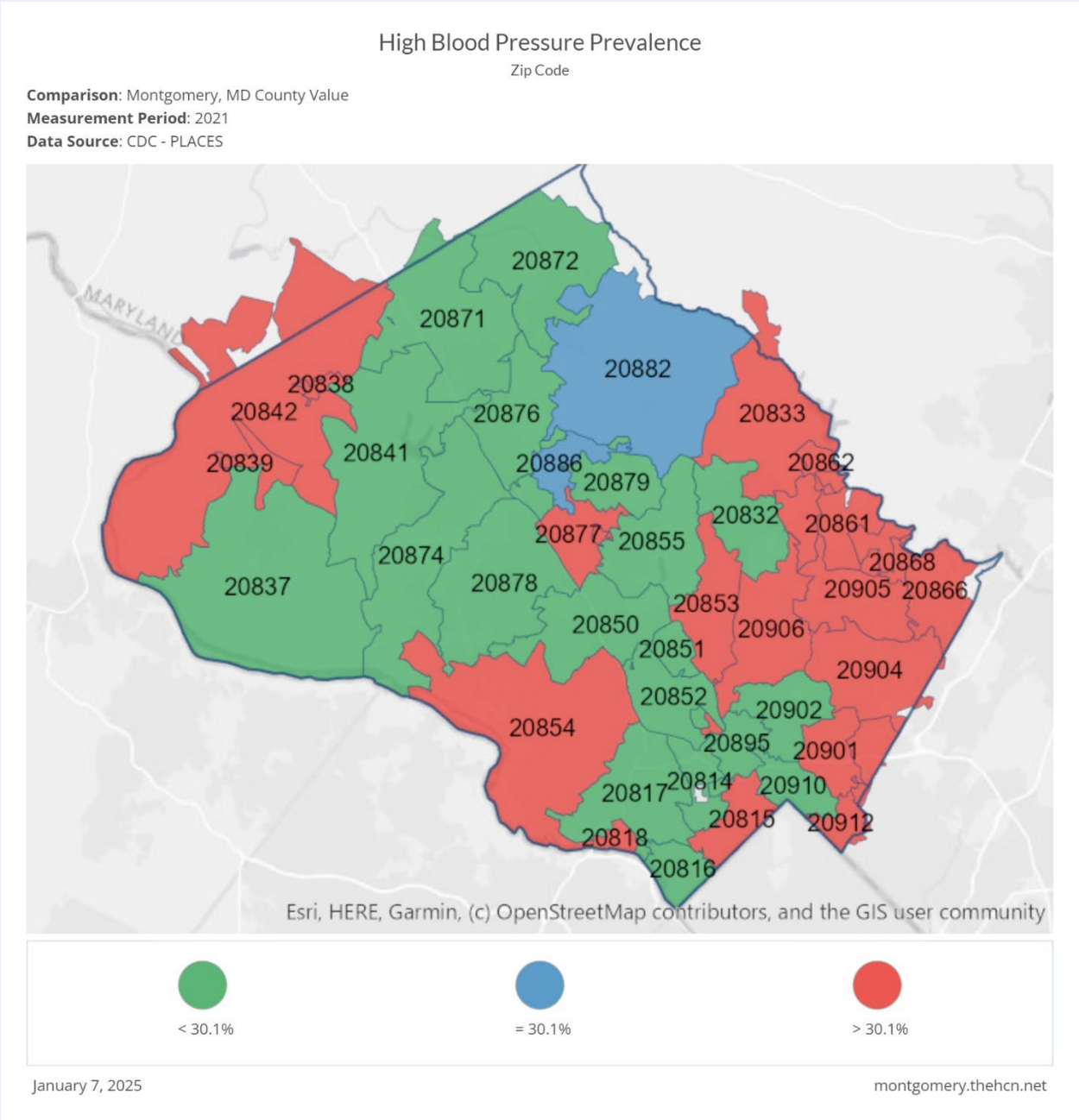


Table 20. Chronic Disease Mortality by Sex and Race/Ethnicity, Montgomery County, 2020-22

	Total	Sex		Race/Ethnicity			
		Male	Female	NH-White	NH-Black	Asian/PI	Hispanic
Heart Disease	5,370	2,707	2,663	3,438	957	550	354
Cancer	4,219	2,013	2,206	2,514	745	528	372
Cerebrovascular Disease	1,164	469	695	691	198	145	111
Diabetes Mellitus	552	311	241	274	139	83	46
Chronic Lower Respiratory Disease	533	219	314	416	61	28	26

Heart Disease

- Heart disease mortality increased in Montgomery County during the COVID-19 pandemic; heart disease mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 60).
- NH-Blacks and NH-Whites had higher heart disease mortality than Asians/PI and Hispanics; males had higher heart disease mortality than females (Figure 61).
- Residents aged 65 and older had the highest heart disease mortality (Figure 62).

Figure 60. Heart Disease Age-Adjusted Mortality Rates, Montgomery County, Maryland, and U.S., 2013-22

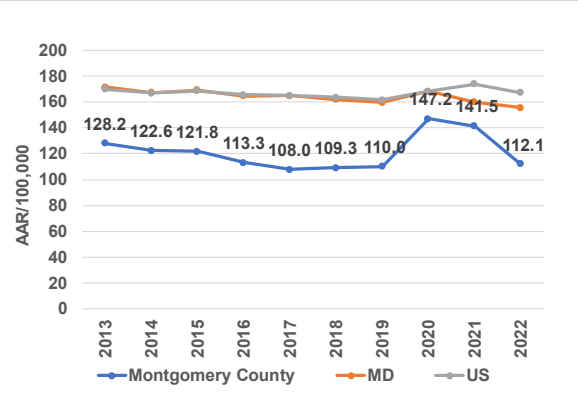
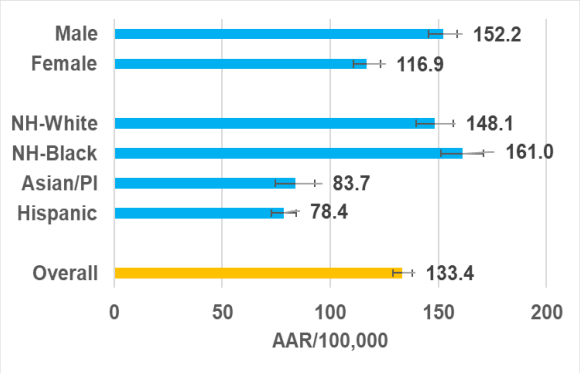
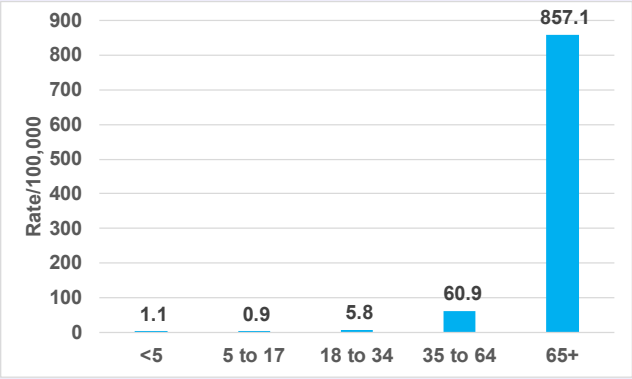


Figure 61. Heart Disease Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

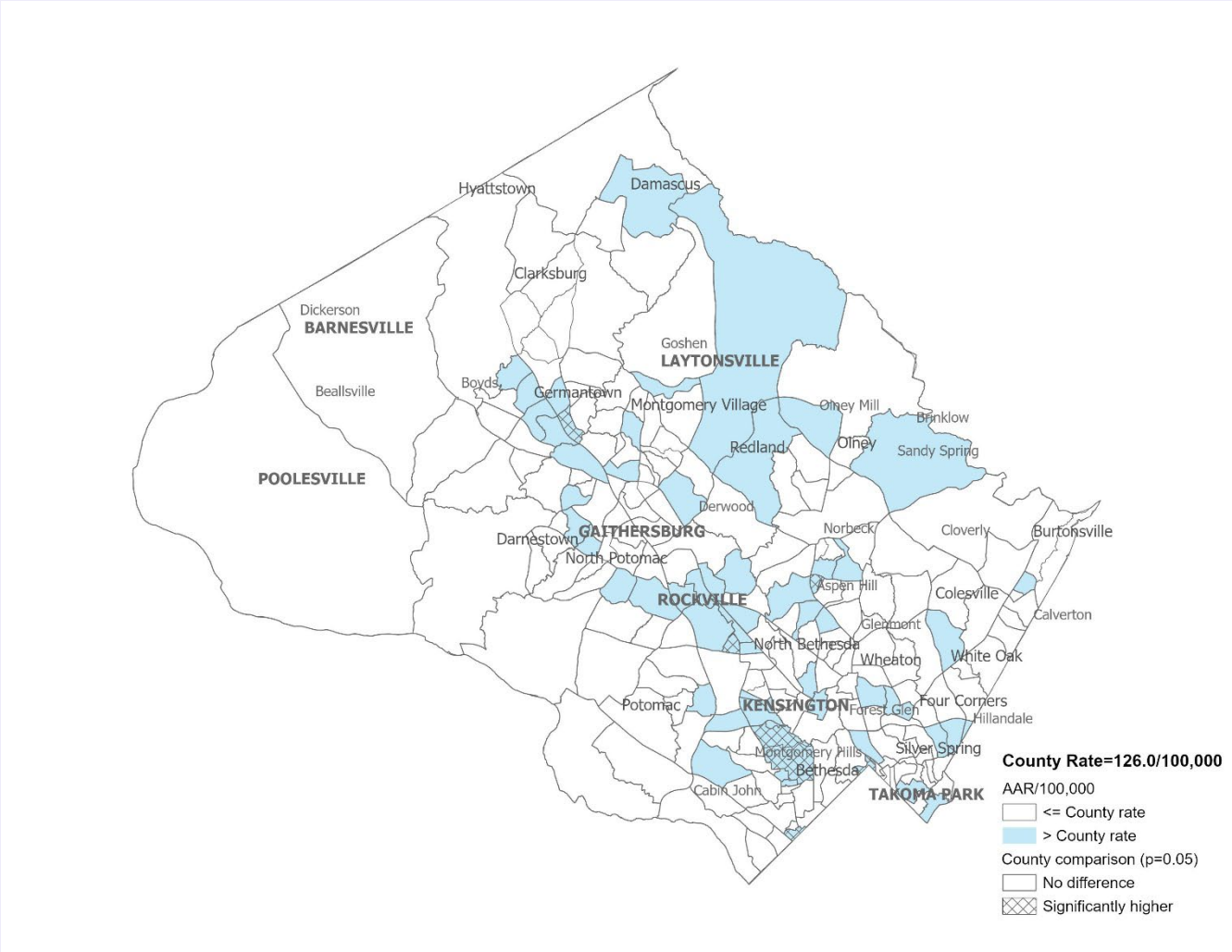


102.6/100,000

Figure 62. Heart Disease Mortality Rates by Age, Montgomery County, 2020-22



Map 7. Heart Disease Age-Adjusted Mortality Rates by Census Tract, Montgomery County, 2020-22



- Heart disease ER visit rates are decreasing, similar to those in Maryland. Rates in the County are consistently lower than those in Maryland (Figure 63).
- Among population subgroups, NH-Blacks had the highest rates, followed by Hispanics, NH-Whites, and Asians/PI; males have higher rates compared to females. (Figure 64).
- Heart disease ER visit rates increase by age; people aged 65 and older have the highest rate (Figure 65).

Figure 63. Heart Disease Related ER Visit Rates, Montgomery County and Maryland, 2013-22

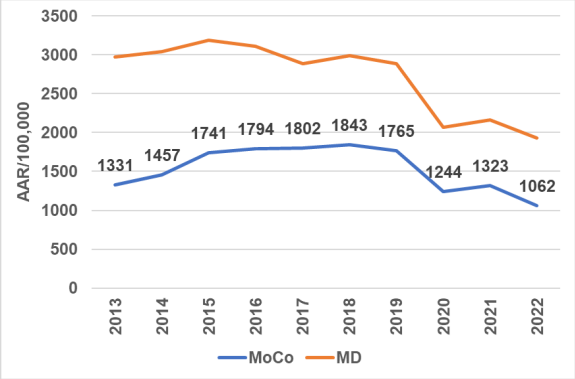
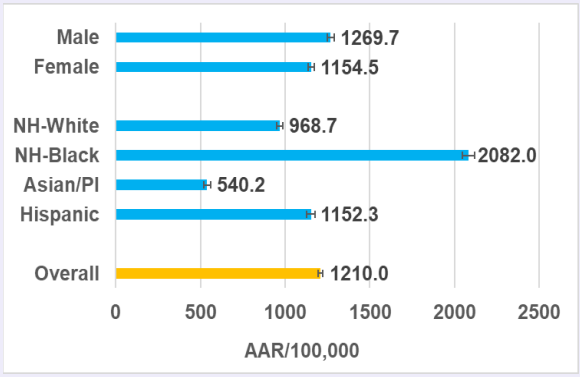


Figure 64. Heart Disease Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



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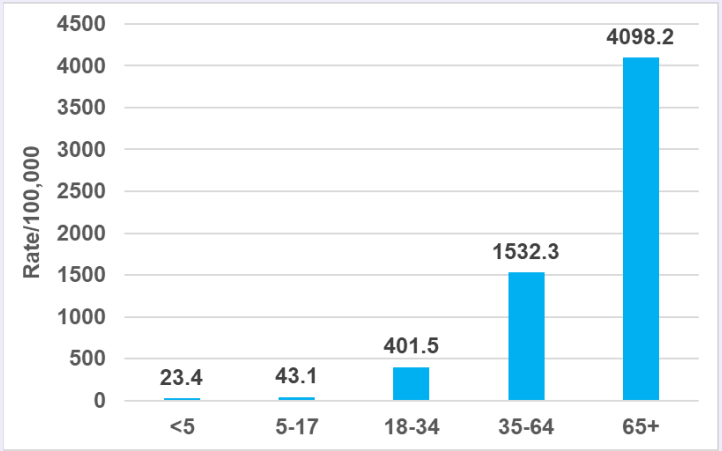
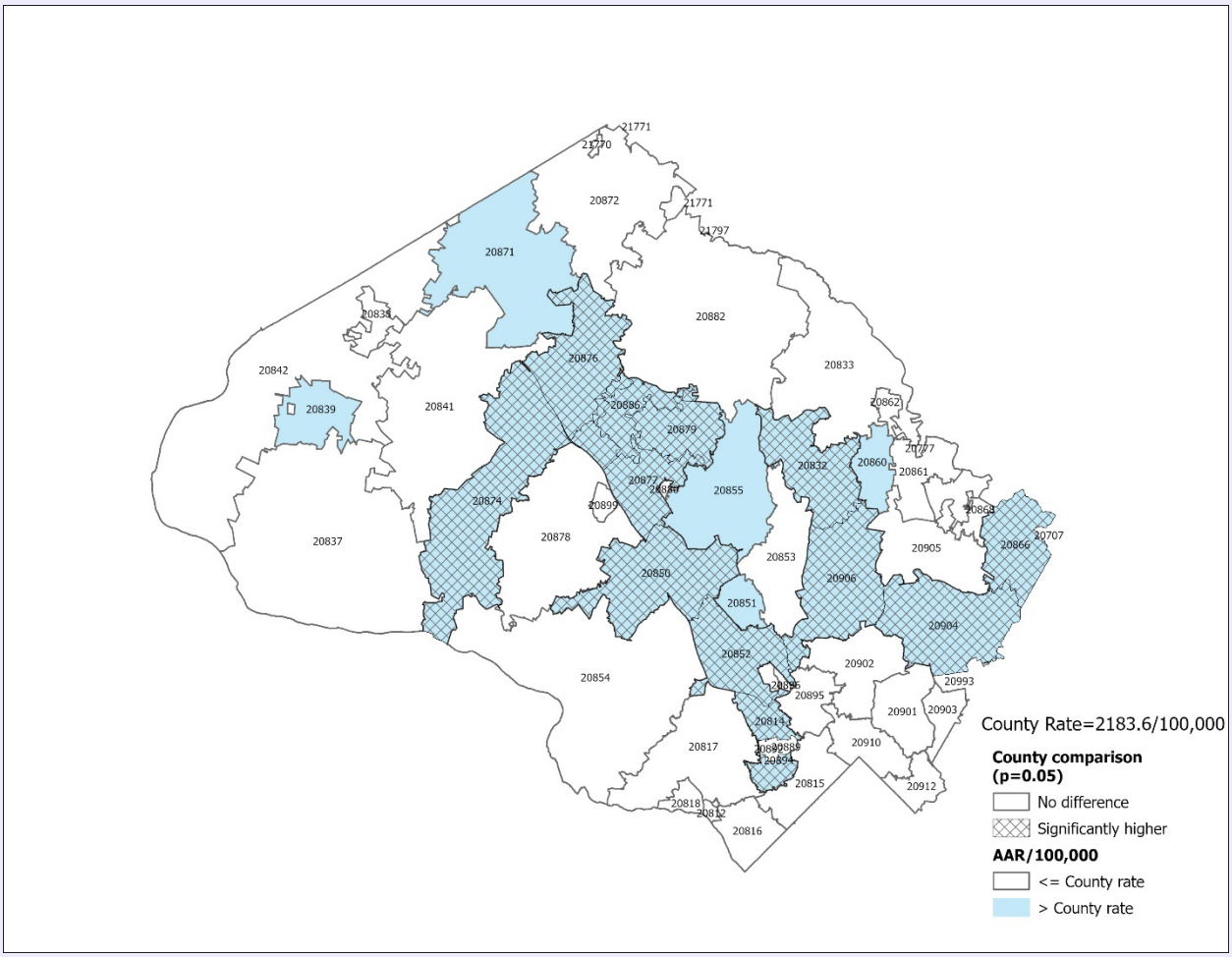
1289.9/100,000

Health inequity (NH-Whites as reference) increased over time for NH-Blacks and Hispanics

Figure 65. Heart Disease Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 8. Heart Disease Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



2.7% (95% CI: 1.8-3.6) adults age 18+ ever told have heart attack in Montgomery County, as compared 3.1% (95% CI: 2.8-3.5) in Maryland

1.9% (95% CI: 1.4-2.5) adults age 18+ ever told have Angina or Coronary Heart Disease in Montgomery County, as compared to 2.6% (95% CI: 2.4-2.9) in Maryland

Cerebrovascular Disease (including Stroke)

- Montgomery County had an increasing trend of cerebrovascular disease mortality since 2020, following the same trends as Maryland and the U.S.; cerebrovascular disease mortality in the County was consistently lower than that of Maryland and the U.S. (Figure 66).
- NH-Blacks had the highest cerebrovascular mortality; females had higher cerebrovascular disease mortality compared to males (Figure 67).
- Residents aged 65 and older had the highest cerebrovascular disease mortality (Figure 68).

Figure 66. Cerebrovascular Disease Age-Adjusted Mortality Rates, Montgomery County, Maryland, and U.S., 2013-22

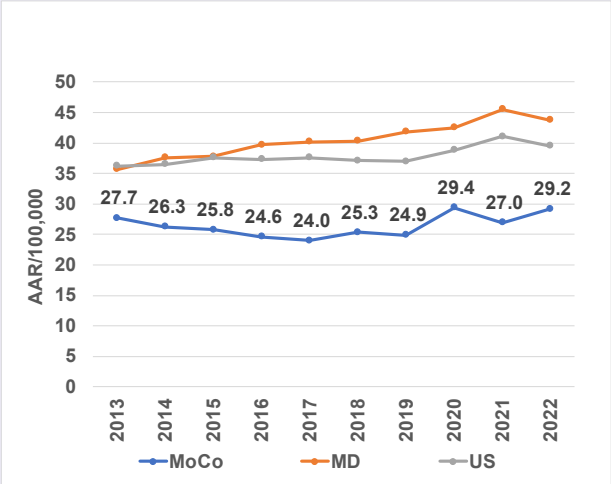


Figure 67. Cerebrovascular Disease Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

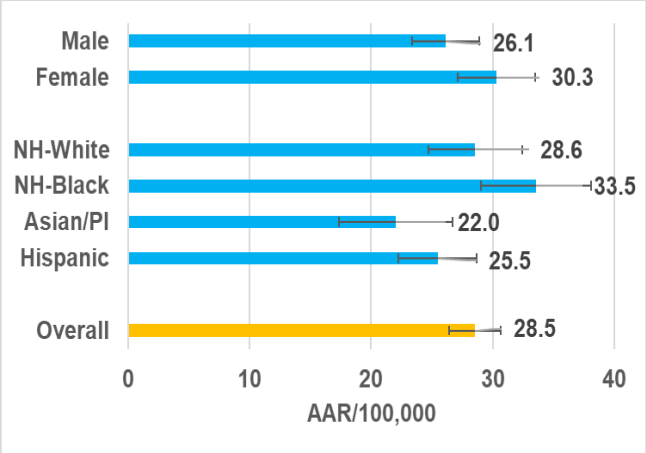
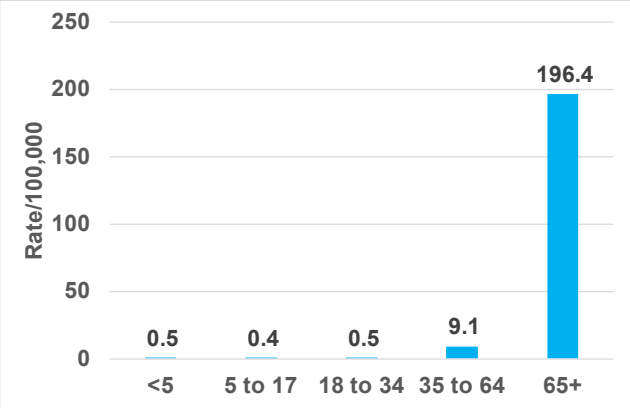
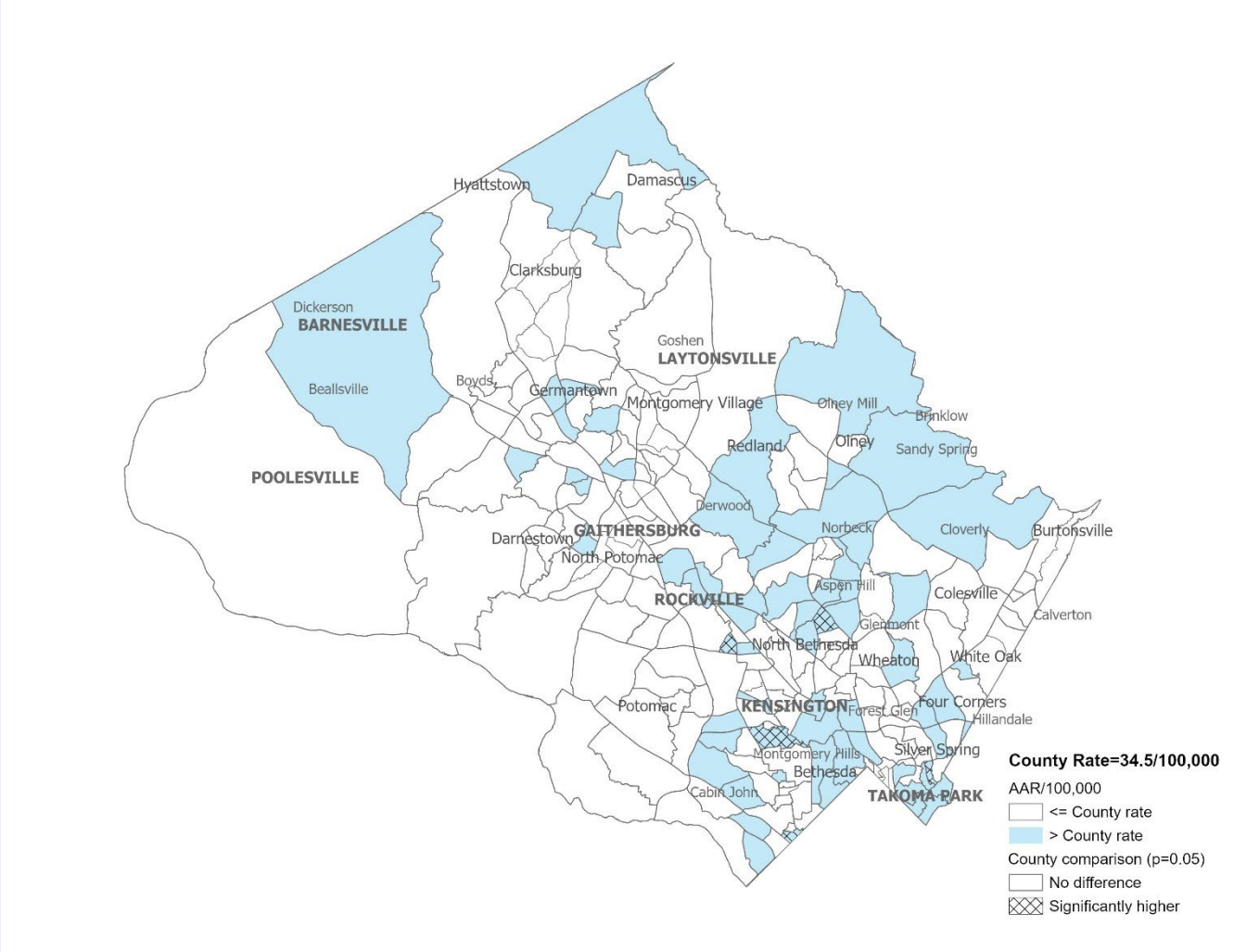


Figure 68. Cerebrovascular Disease Mortality Rates by Age, Montgomery County, 2020-22



Map 9. Cerebrovascular Disease Age-Adjusted Mortality Rates by Census Tract, Montgomery County, 2020-22



- Cerebrovascular disease ER visit rates increased up until 2021, then decreased in 2022; the rates in the County are consistently lower than those in Maryland (Figure 69).
- Among population subgroups, NH-Black had the highest rates, followed by Hispanic and NH-White; males have higher rates compared to females (Figure 70).
- Cerebrovascular disease ER visits rates increase by age; people aged 65 and older have the highest rate (Figure 71).

Figure 69. Cerebrovascular Disease Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

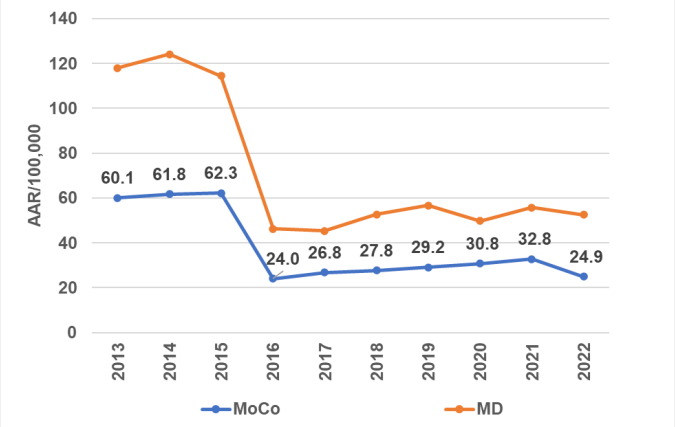


Figure 70. Cerebrovascular Disease Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

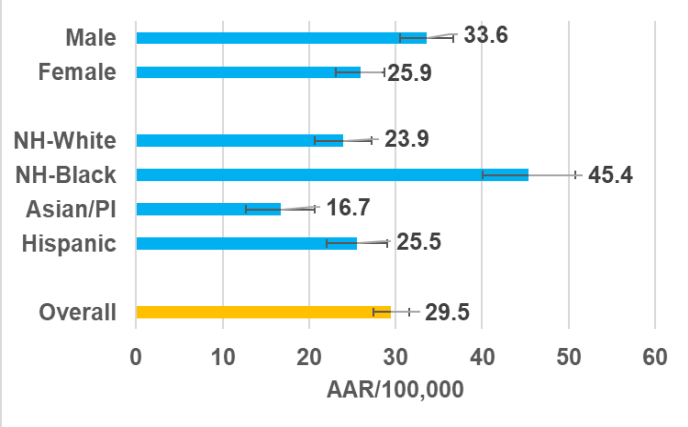
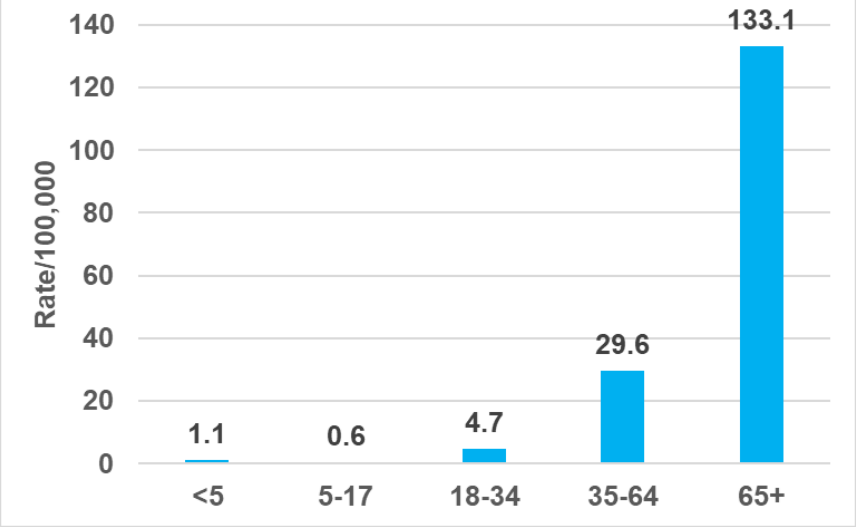
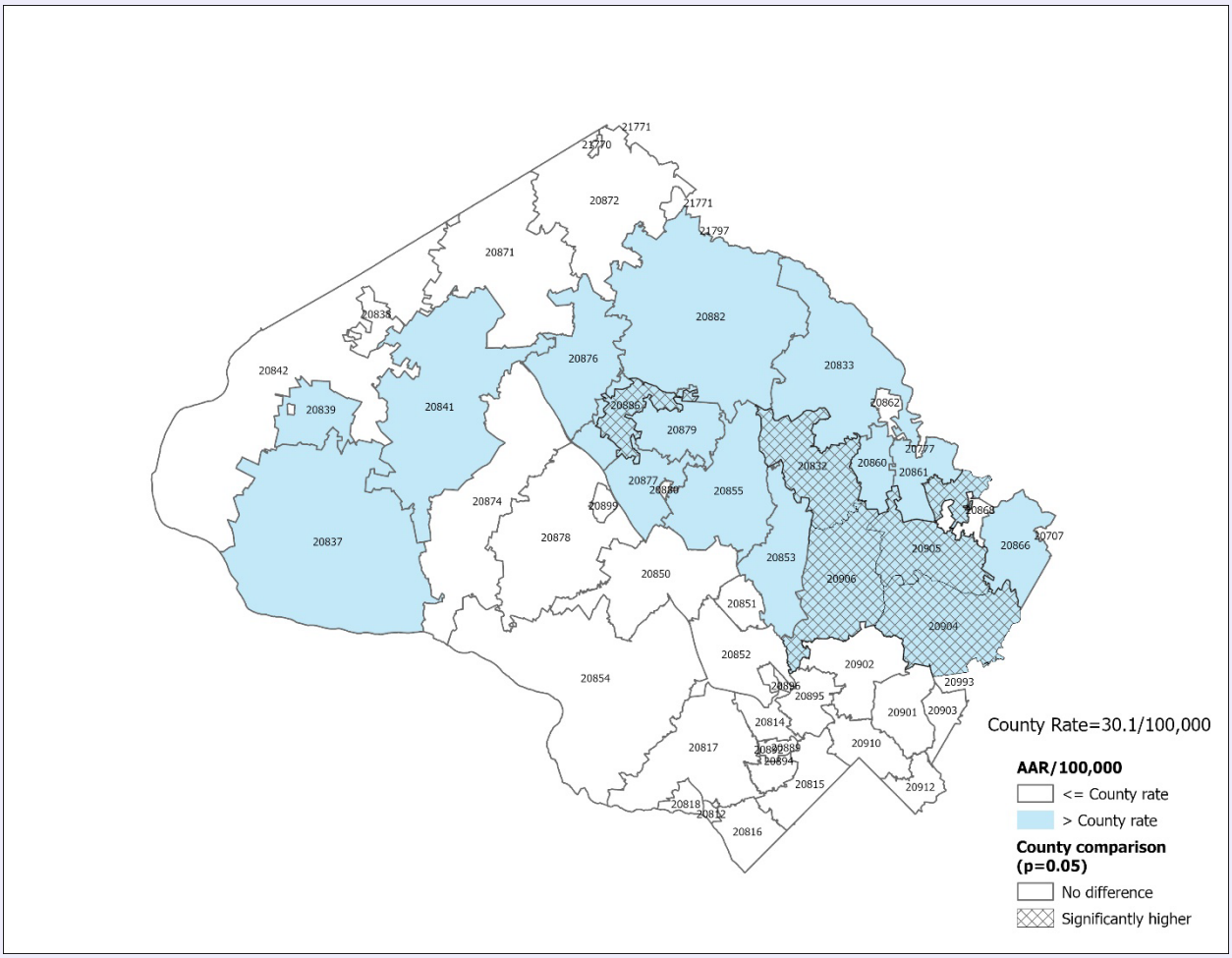


Figure 71. Cerebrovascular Disease Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 10. Cerebrovascular Disease Related ER Visit Age-Adjusted Rate by Zip Code, Montgomery County, 2020-22



1.6% (95% CI: 1.0-2.2) adults age 18+ ever told have stroke in Montgomery County, as compared 2.5% (95% CI: 2.2-2.8) in Maryland.

33.4 stroke deaths per 100,000 population

Chronic Lower Respiratory Disease (including COPD)

- Montgomery County had a decreasing trend of chronic lower respiratory disease mortality since 2011 but had an increase in 2018, following the same trends as Maryland and the U.S.; chronic lower respiratory disease mortality in the County was consistently lower than that of Maryland and the U.S. (Figure 72).
- NH-Whites and NH-Blacks had higher chronic lower respiratory disease mortality than Hispanics and Asians/PI; females have higher rates compared to males (Figure 73).
- Residents aged 65 and older had the highest chronic lower respiratory disease mortality (Figure 74).

Figure 72. Chronic Lower Respiratory Disease Age-Adjusted Mortality Rates, Montgomery County, Maryland, and U.S., 2013-22

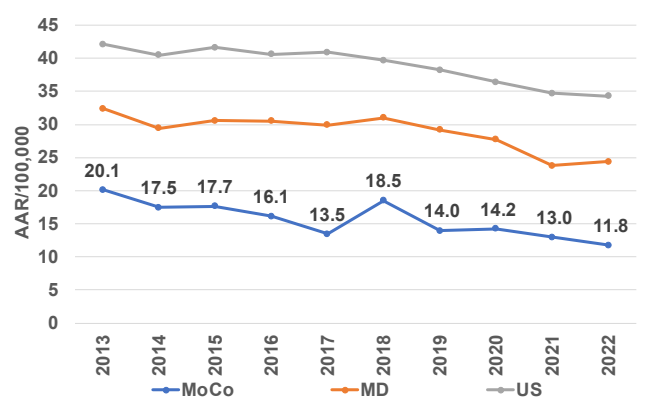
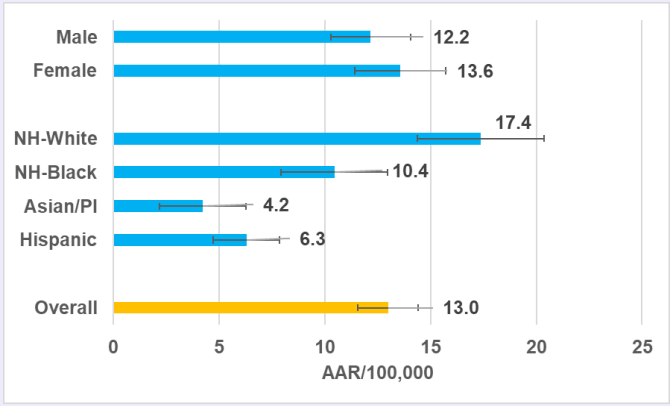


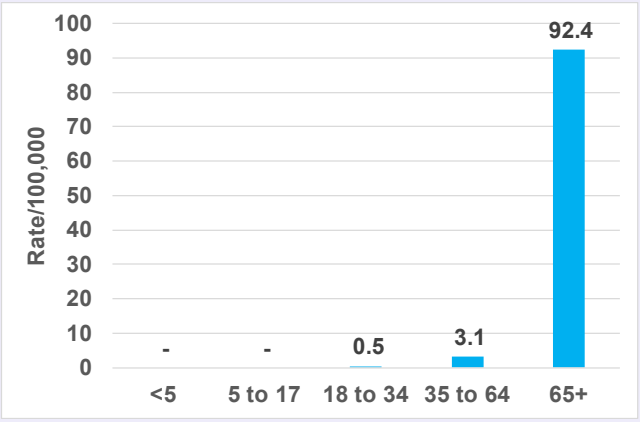
Figure 73. Chronic Lower Respiratory Disease Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



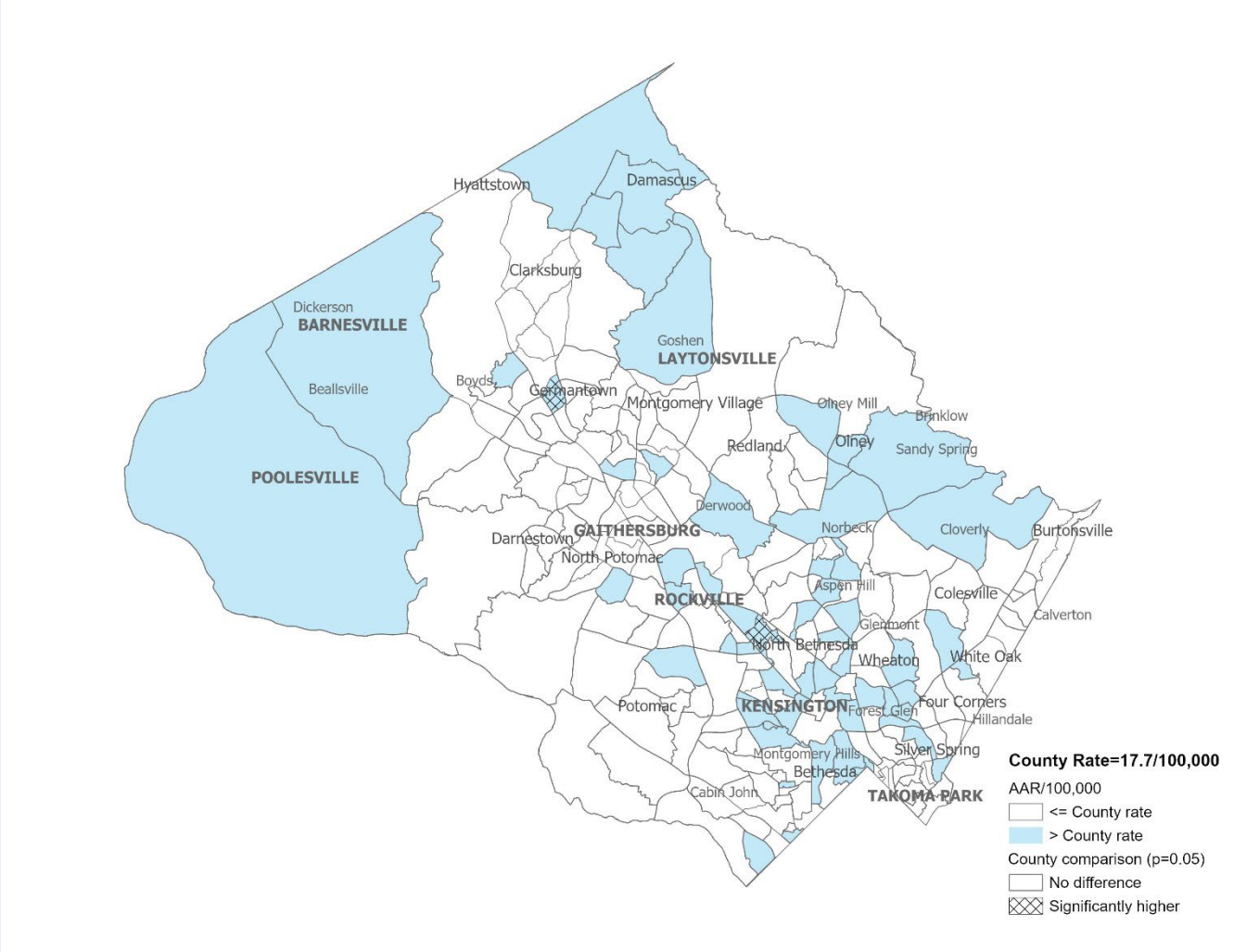
healthy montgomery 2030

9.1/100,000

Figure 74. Chronic Lower Respiratory Disease Mortality Rates by Age, Montgomery County, 2020-22



Map 11. Chronic Lower Respiratory Disease Age-Adjusted Mortality Rates by Census Tract, Montgomery County, 2020-22



- Chronic lower respiratory disease ER visit rates in the County fluctuated over time until 2019 where it started decreasing, similar to that observed in Maryland; the rates in the County are consistently lower than Maryland (Figure 75).
- Among population subgroups, NH-Black had the highest rates, followed by Hispanics, NH-Whites, and Asian/PI; females had a higher rate than males (Figure 76).
- Young adults aged 18-34 have the highest rates, followed by those aged under 5 (Figure 77).

Figure 75. Chronic Lower Respiratory Disease Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

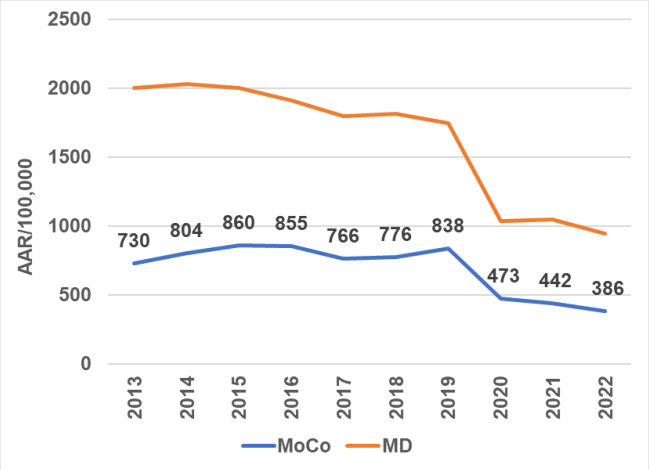
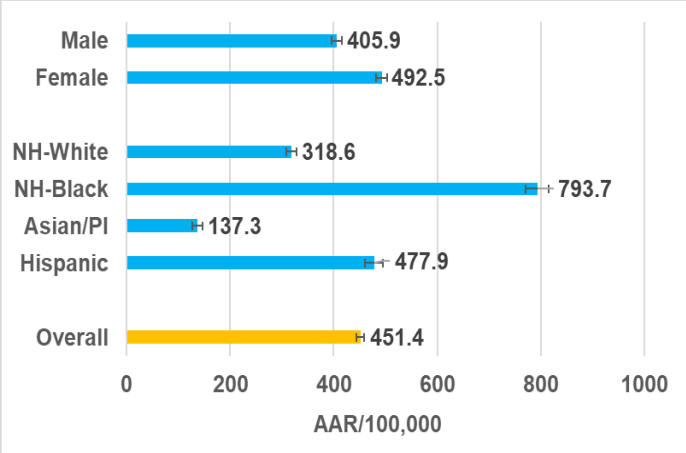
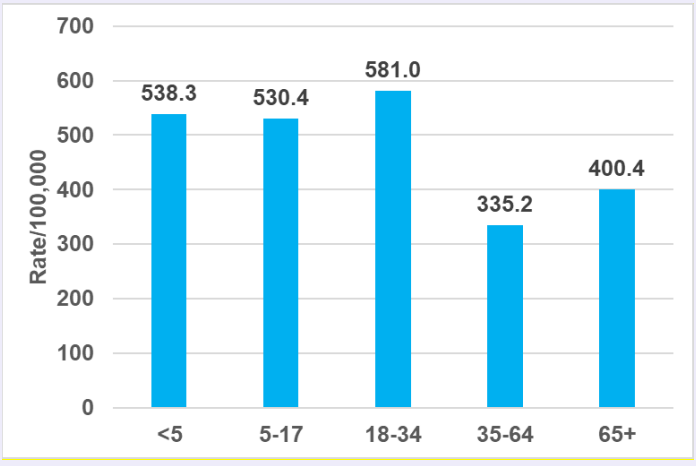


Figure 76. Chronic Lower Respiratory Disease Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

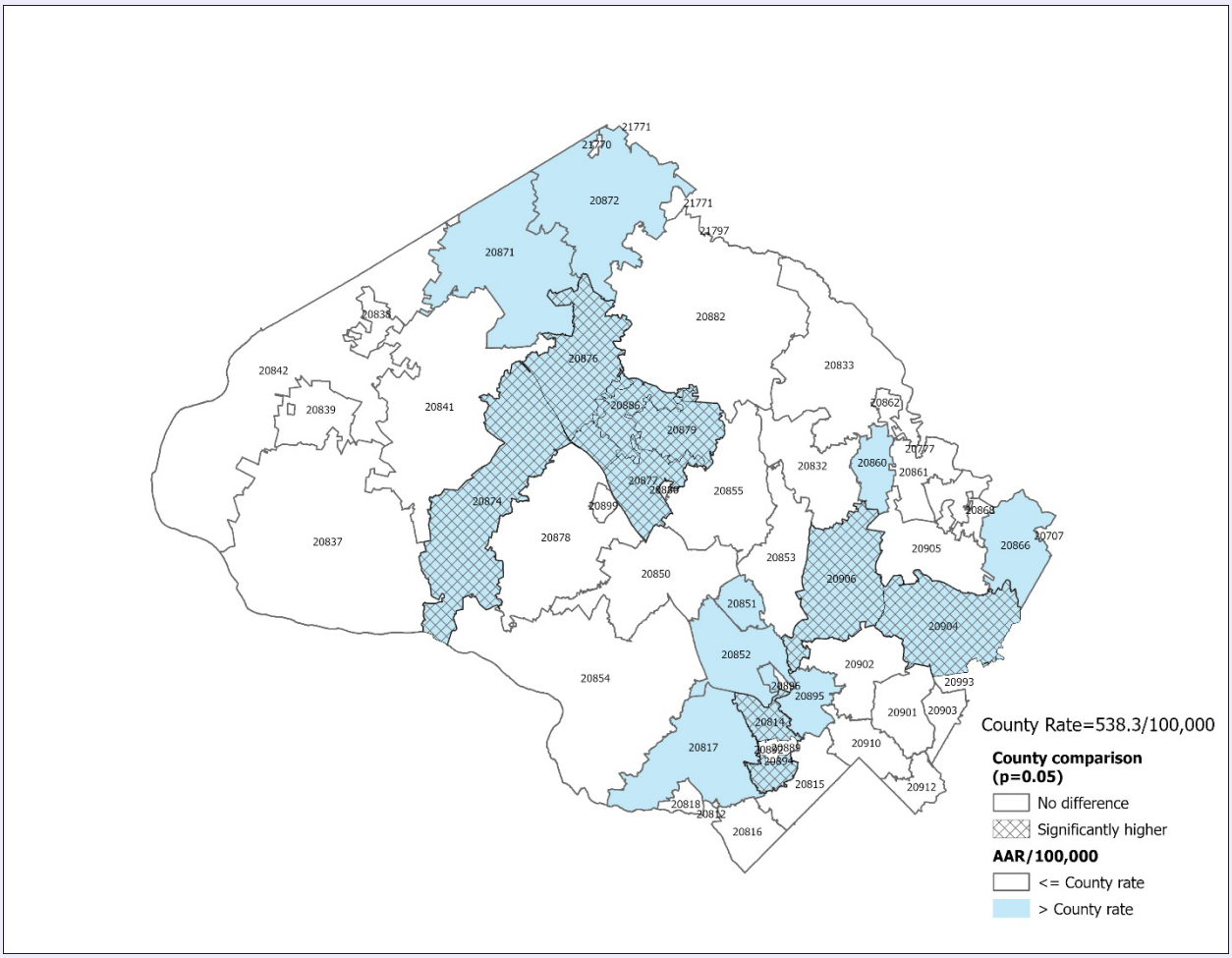


430.4/100,000

Figure 77. Chronic Lower Respiratory Disease Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 12. Chronic Lower Respiratory Disease Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



1.7% (95% CI: 1.1-2.4) adults age 18+ ever told have COPD in Montgomery County, as compared 4.3% (95% CI: 3.9-4.8) in Maryland.

107.2 deaths per 100,000 adults aged 45+ population for COPD
64.0 ED visits per 10,000 adults aged 45+ population for COPD

Cancer

Cancer is the second most common cause of death in the U.S. Cancer is largely controllable through prevention, early detection, and treatment. Reducing the cancer burden requires reducing the prevalence of the behavioral and environmental factors that increase cancer risk. It also requires ensuring that cancer screening services and high-quality treatment are available and accessible, particularly to medically underserved populations.

- The overall cancer incidence rate in Montgomery County fluctuated over time; the rates for the County were consistently lower than in Maryland and the U.S. (Figure 78).
- Similar to incidence, overall cancer mortality in the County decreased and was consistently lower than in Maryland and the U.S. (Figure 79).
- Males had higher overall cancer incidence and mortality than females; through overall cancer incidence and mortality among NH-Blacks were higher than NH-Whites, the differences were not statistically significant (Figure 80 & Figure 81).

Figure 78. Cancer Age-Adjusted Incidence Rates, All Sites, Montgomery County, Maryland, and US, 2013-18

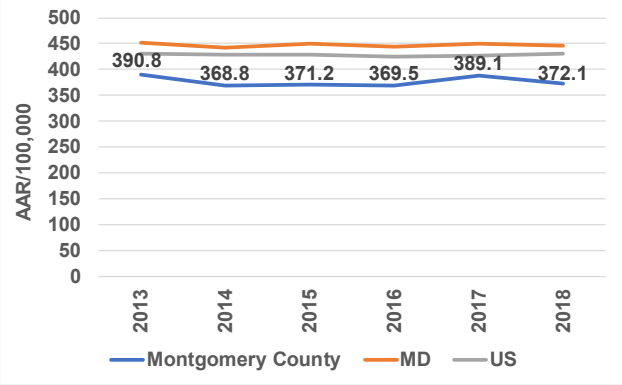


Figure 79. Cancer Age-Adjusted Mortality Rates, All Sites, Montgomery County, Maryland and US, 2013-18

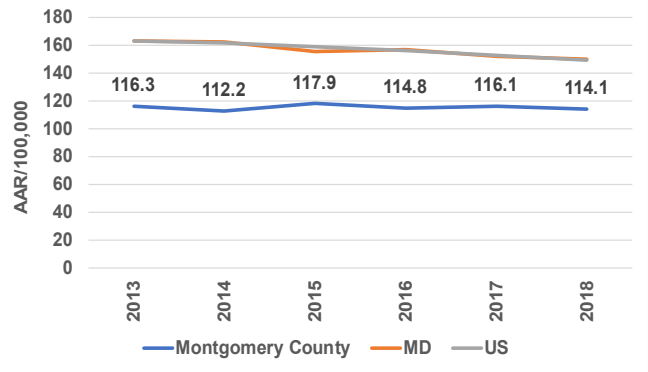


Figure 80. Cancer Age-Adjusted Incidence Rates by Sex and Race, All Sites, Montgomery County, 2014-18

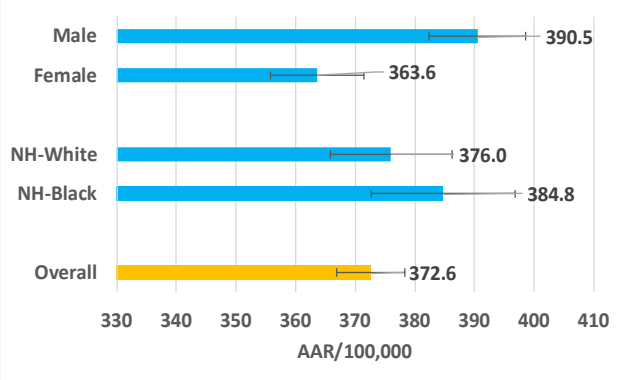
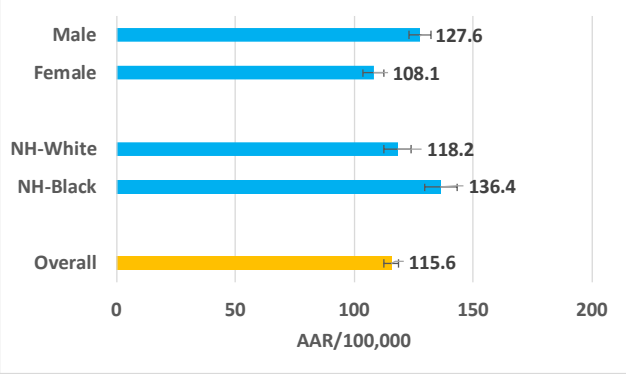


Figure 81. Cancer Age-Adjusted Mortality Rates by Sex and Race, All Sites, Montgomery County, 2014-18



- The overall incidence rate of lung and bronchus cancer in the County followed similarly decreasing trends in Maryland and the U.S. between 2013 and 2018; the rate for the County is consistently lower than that of Maryland and the U.S. (Figure 82).
- Similar to incidence, mortality from lung and bronchus cancer in the County decreased and was consistently lower than in Maryland and the U.S. (Figure 83).
- Males had higher incidence and mortality compared to females (Figure 84 & Figure 85).
- Though both incidence and mortality among NH-Whites were higher than NH-Blacks, the differences were not statistically significant (Figure 84 & Figure 85).

Figure 82. Cancer Age-Adjusted Incidence Rates, Lung and Bronchus, Montgomery County, Maryland, and US, 2013-18

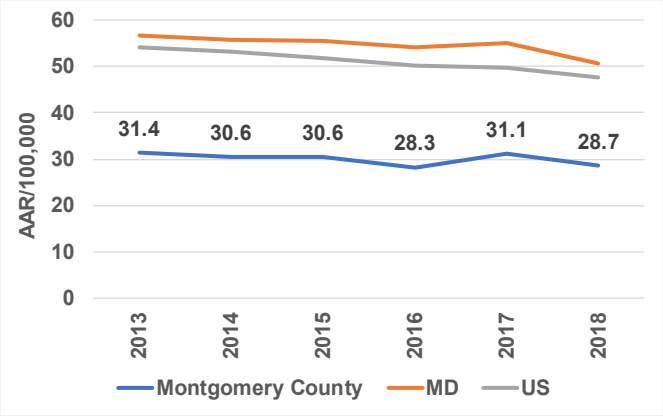


Figure 83. Cancer Age-Adjusted Mortality Rates, Lung and Bronchus, Montgomery County, Maryland, and US, 2013-18

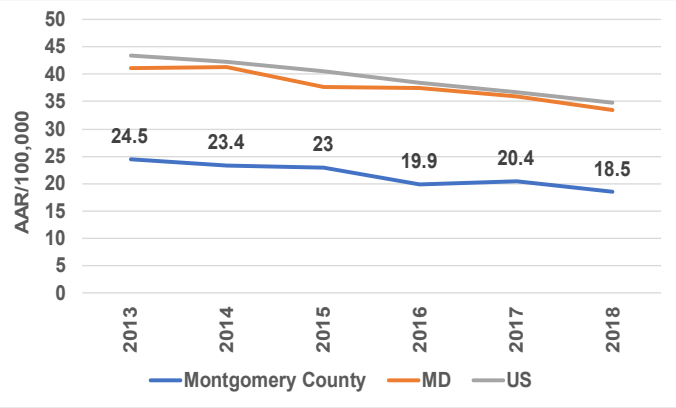


Figure 84. Cancer Age-Adjusted Incidence Rates by Sex and Race, Lung and Bronchus, Montgomery County, 2014-18

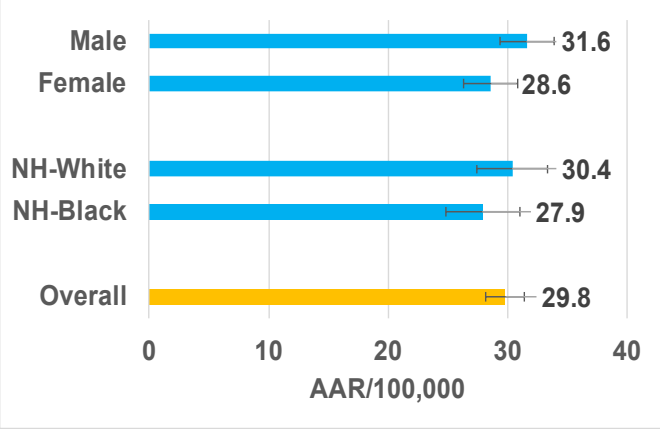
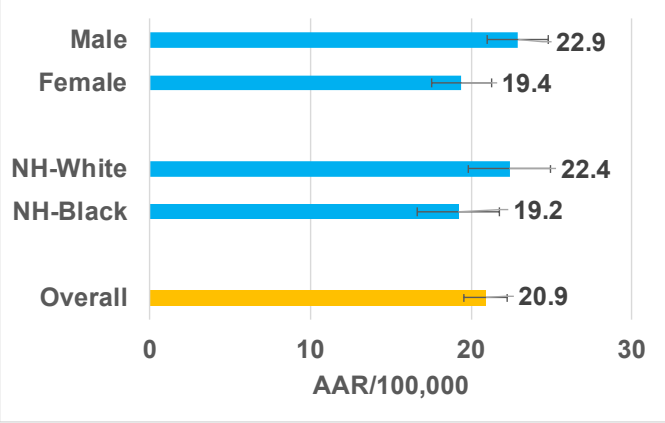


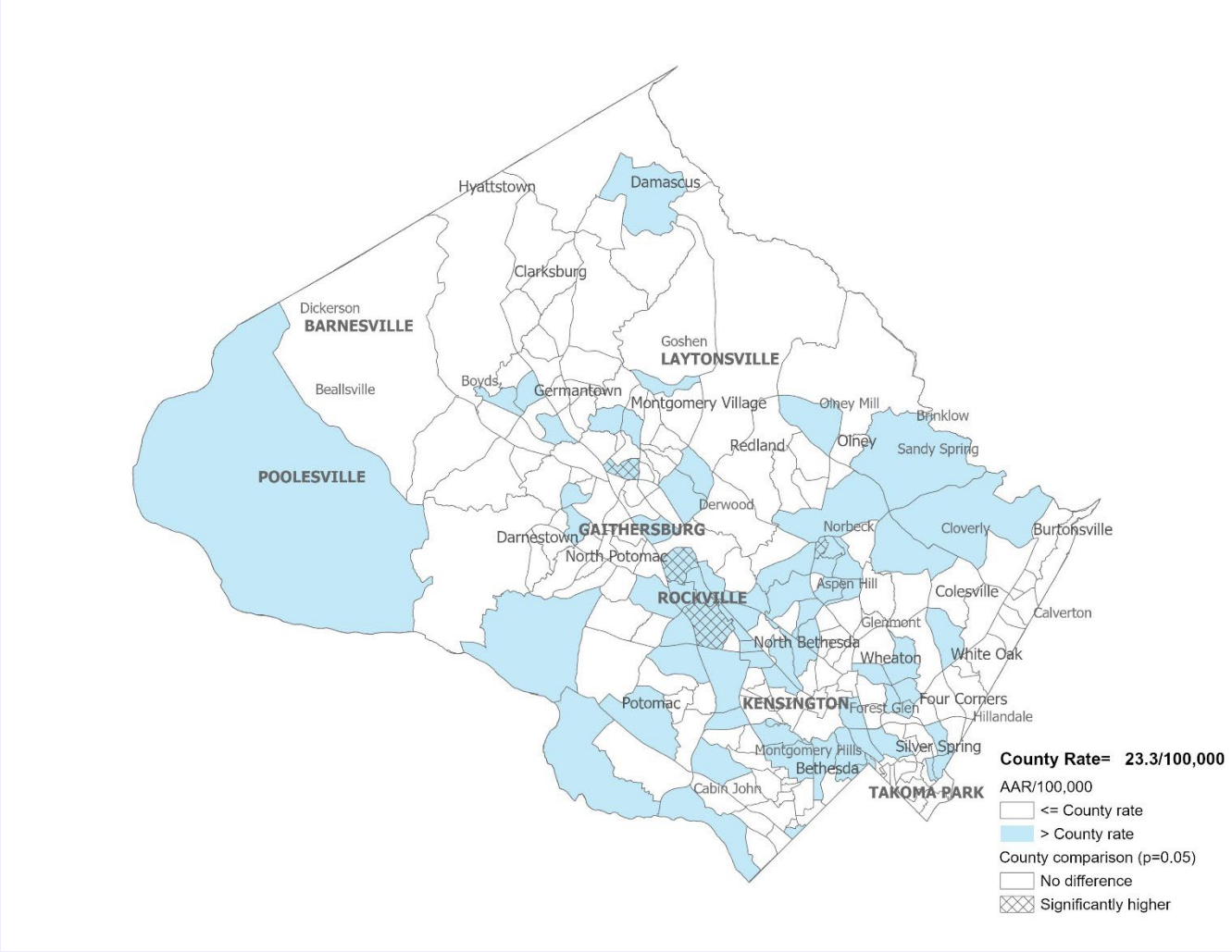
Figure 85. Cancer Age-Adjusted Mortality Rates by Sex and Race, Lung and Bronchus, Montgomery County, 2014-18



MARYLAND BRFSS Behavioral Risk Factor Surveillance System

7.3% (95% CI: 5.4-9.1) adults age 18+ are current smokers in Montgomery County, as compared 13.1% (95% CI: 12.2-14.0) in Maryland

Map 13. Cancer Age-Adjusted Mortality Rates by Census Tract, Lung and Bronchus, Montgomery County, 2014-22



- The overall incidence rate of colon and rectum cancer in the County fluctuated between 2013 and 2018; the rate for the County was consistently lower than in Maryland and the U.S. (Figure 86).
- Mortality from colon and rectum cancer in the County increased over time and was consistently lower than in Maryland and the U.S. (Figure 87).
- Males had higher incidence than females, though not statistically significant (Figure 88 & Figure 89).
- NH-Blacks had higher incidence and mortality than NH-Whites, though the difference in incidence was not statistically significant (Figure 88 & Figure 89).

Figure 86. Cancer Age-Adjusted Incidence Rates, Colon and Rectum, Montgomery County, Maryland, and US, 2013-18

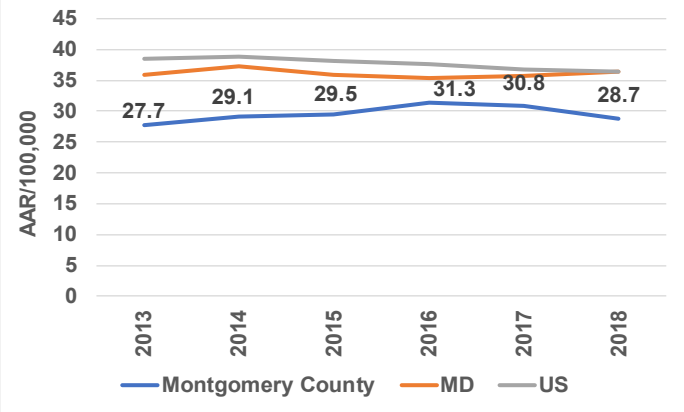


Figure 87. Cancer Age-Adjusted Mortality Rates, Colon and Rectum, Montgomery County, Maryland, and US, 2013-18

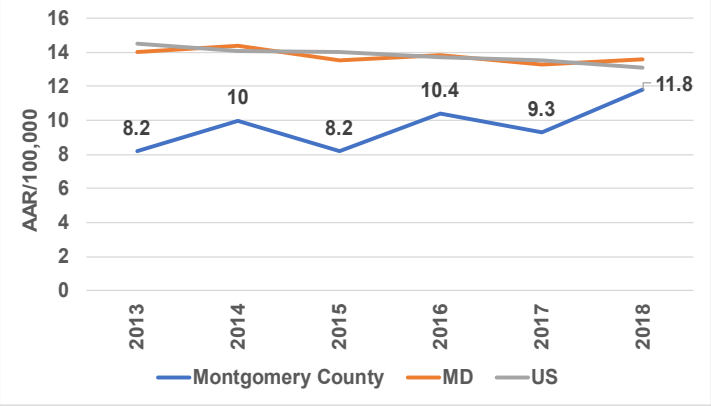


Figure 88. Cancer Age-Adjusted Incidence Rates by Sex and Race, Colon and Rectum, Montgomery County, 2014-18

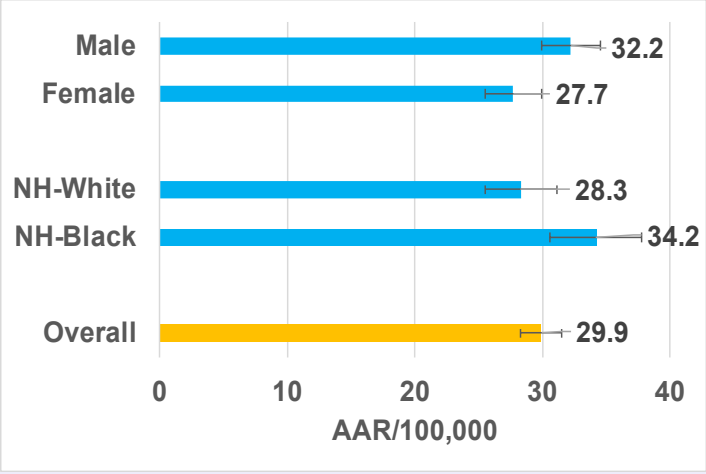
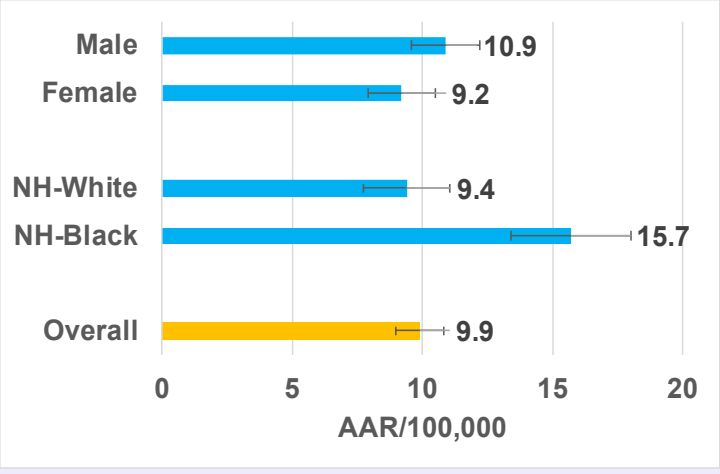
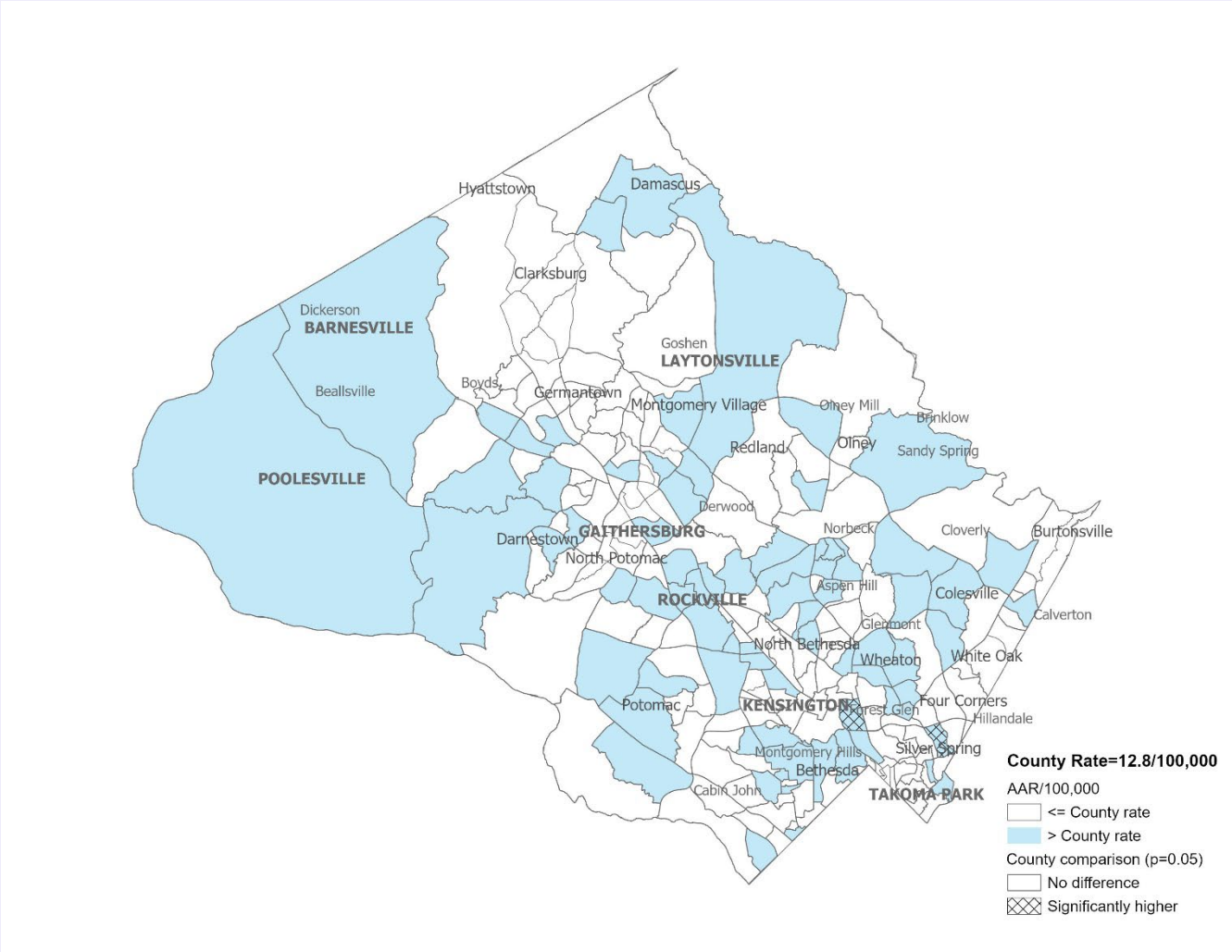


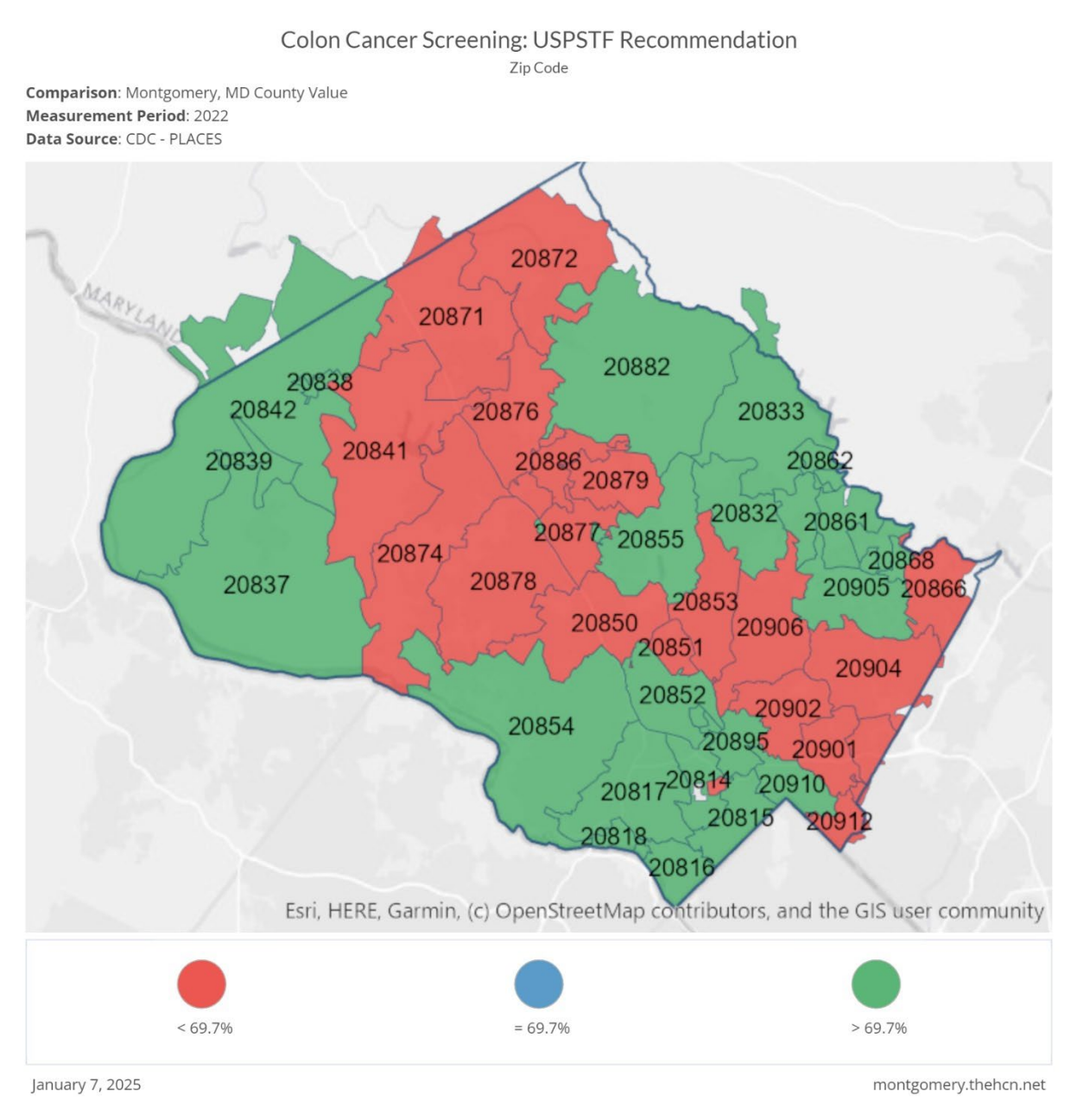
Figure 89. Cancer Age-Adjusted Mortality Rates by Sex and Race, Colon and Rectum, Montgomery County, 2014-18



Map 14. Cancer Age-Adjusted Mortality Rates by Census Tract, Colon and Rectum, Montgomery County, 2014-22



Map 15. Colon Cancer Screening: USPSTF Recommendation, Montgomery County, 2022



- The incidence rate of female breast cancer in the County decreased over time, following similar trends in Maryland 2010-16; the rates for the County and Maryland were consistently higher than the U.S. up until 2015 (Figure 90).
- The mortality rate in the County followed the decreasing trends seen in Maryland and the U.S.; the County rate was consistently lower than in Maryland and the U.S. (Figure 91).
- NH-Blacks had higher mortality than NH-Whites at the marginal level (Figure 92 & Figure 93).

Figure 90. Cancer Age-Adjusted Incidence Rates, Female Breast, Montgomery County, Maryland, and US, 2013-18

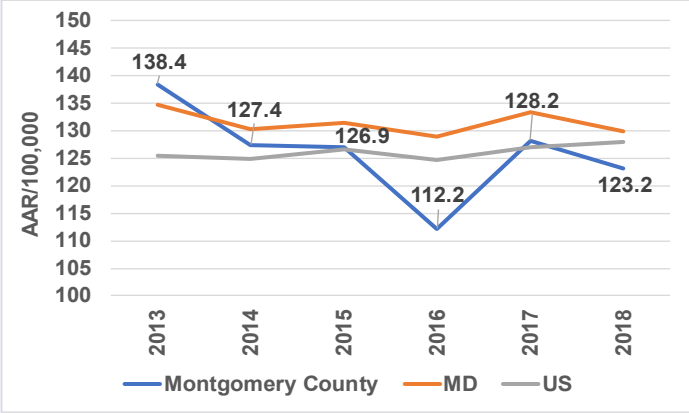


Figure 91. Cancer Age-Adjusted Mortality Rates, Female Breast, Montgomery County, Maryland and US, 2013-18

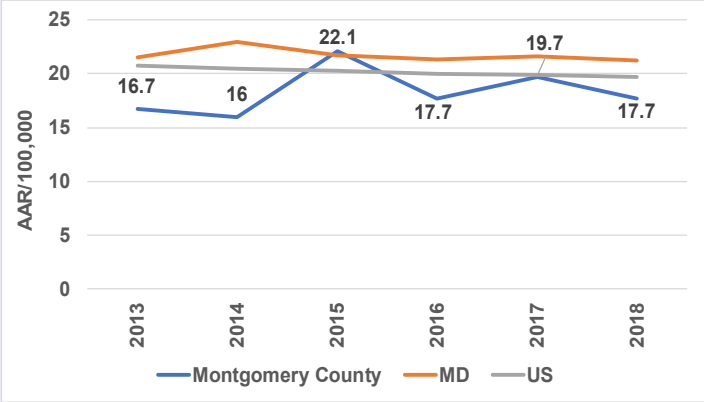


Figure 92. Cancer Age-Adjusted Incidence Rates by Race, Female Breast, Montgomery County, 2014-18

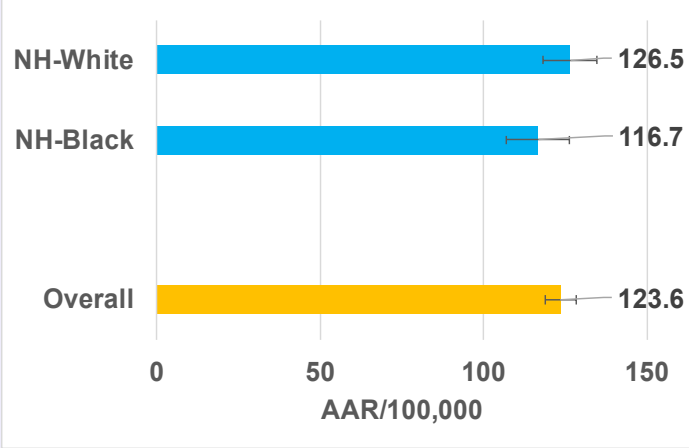
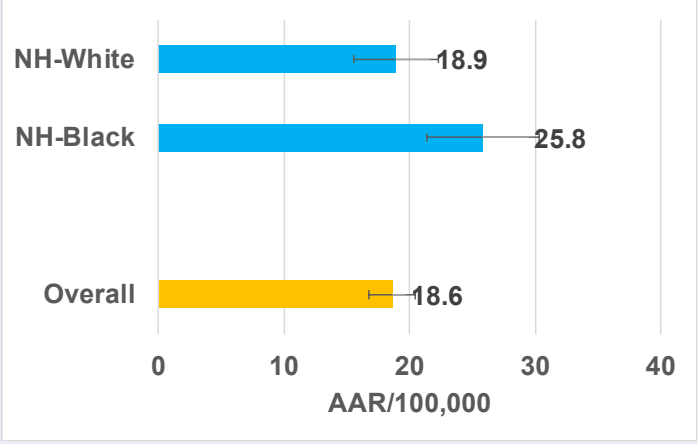
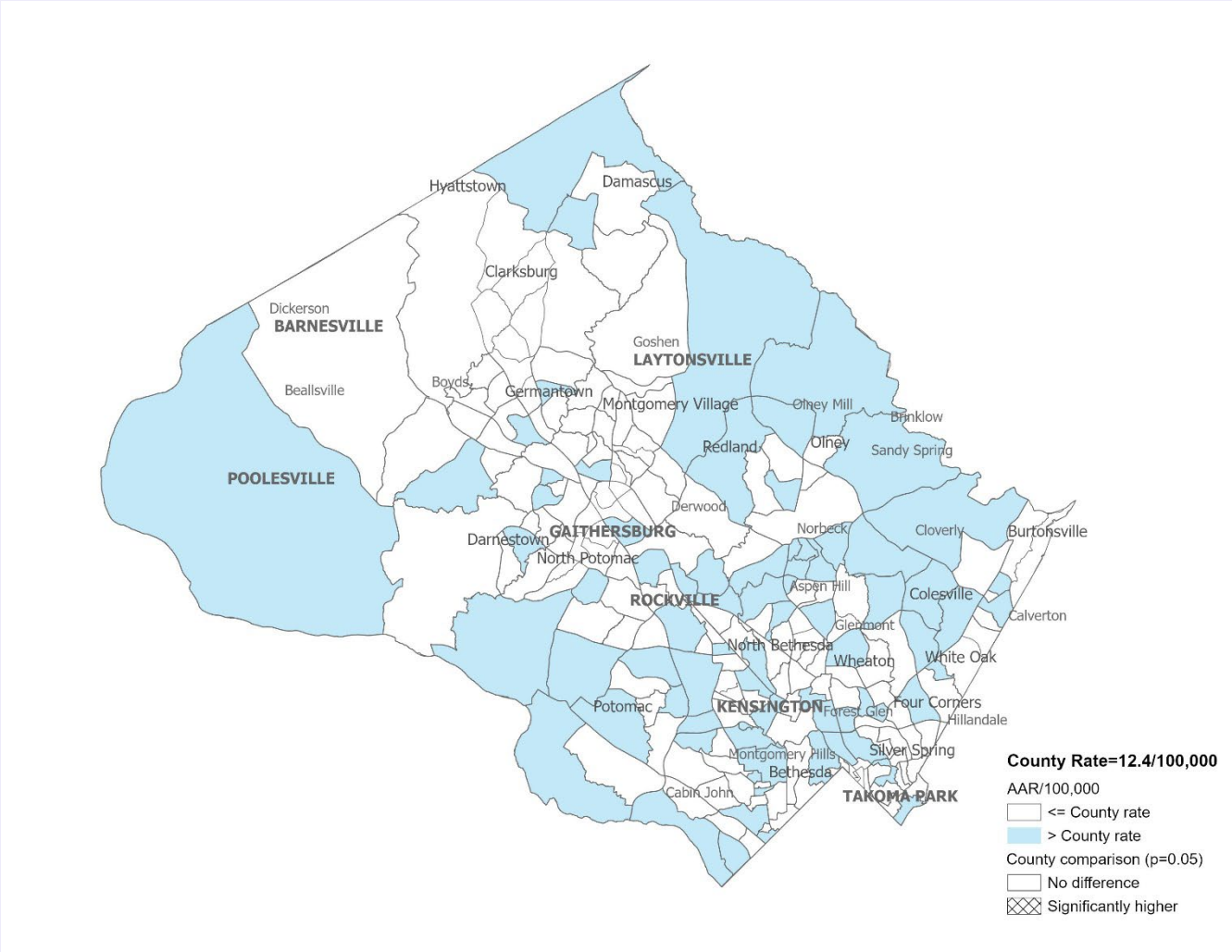


Figure 93. Cancer Age-Adjusted Mortality Rates by Race, Female Breast, Montgomery County, 2014-18



Map 16. Cancer Age-Adjusted Mortality Rates by Census Tract, Female Breast, Montgomery County, 2014-22



- The incidence rate of prostate cancer in the County increased over time; County rates were consistently lower than Maryland but higher than the U.S. (Figure 94).
- The mortality rate in the County fluctuated; the County rate was consistently lower than that of Maryland and the U.S. (Figure 95).
- NH-Blacks had statistically significant higher rates than NH-Whites for both incidence and mortality (Figure 96 & Figure 97).

Figure 94. Cancer Age-Adjusted Incidence Rates, Prostate, Montgomery County, Maryland, and US, 2013-18

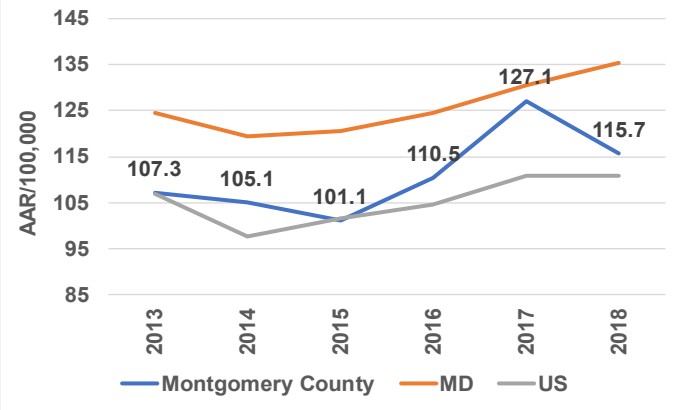


Figure 95. Cancer Age-Adjusted Mortality Rates, Prostate, Montgomery County, Maryland, and US, 2013-18

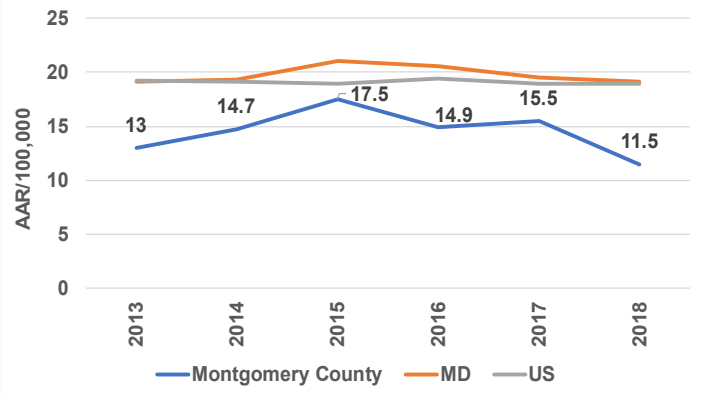


Figure 96. Cancer Age-Adjusted Incidence Rates by Race, Prostate, Montgomery County, 2014-18

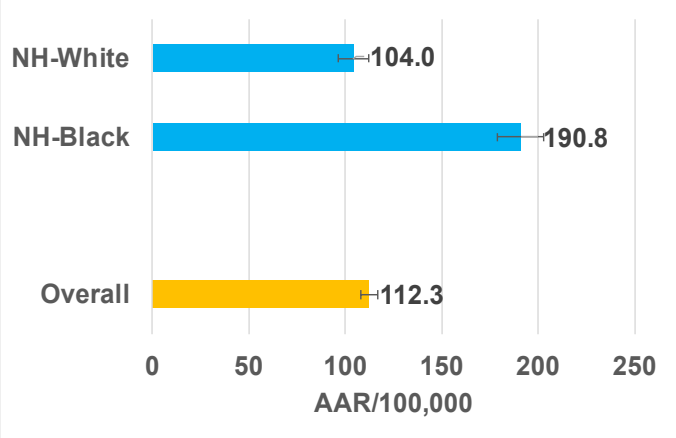
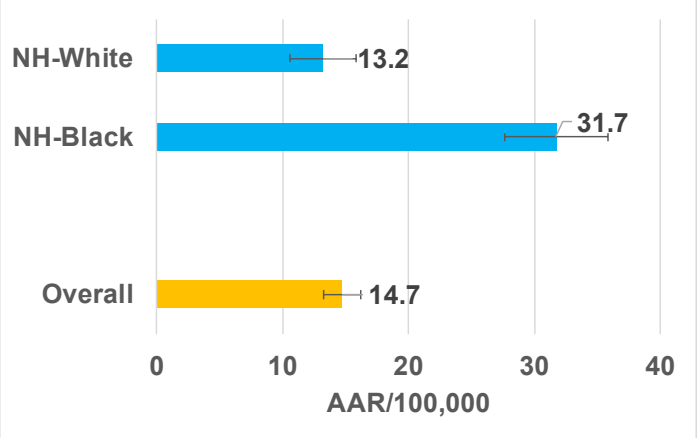
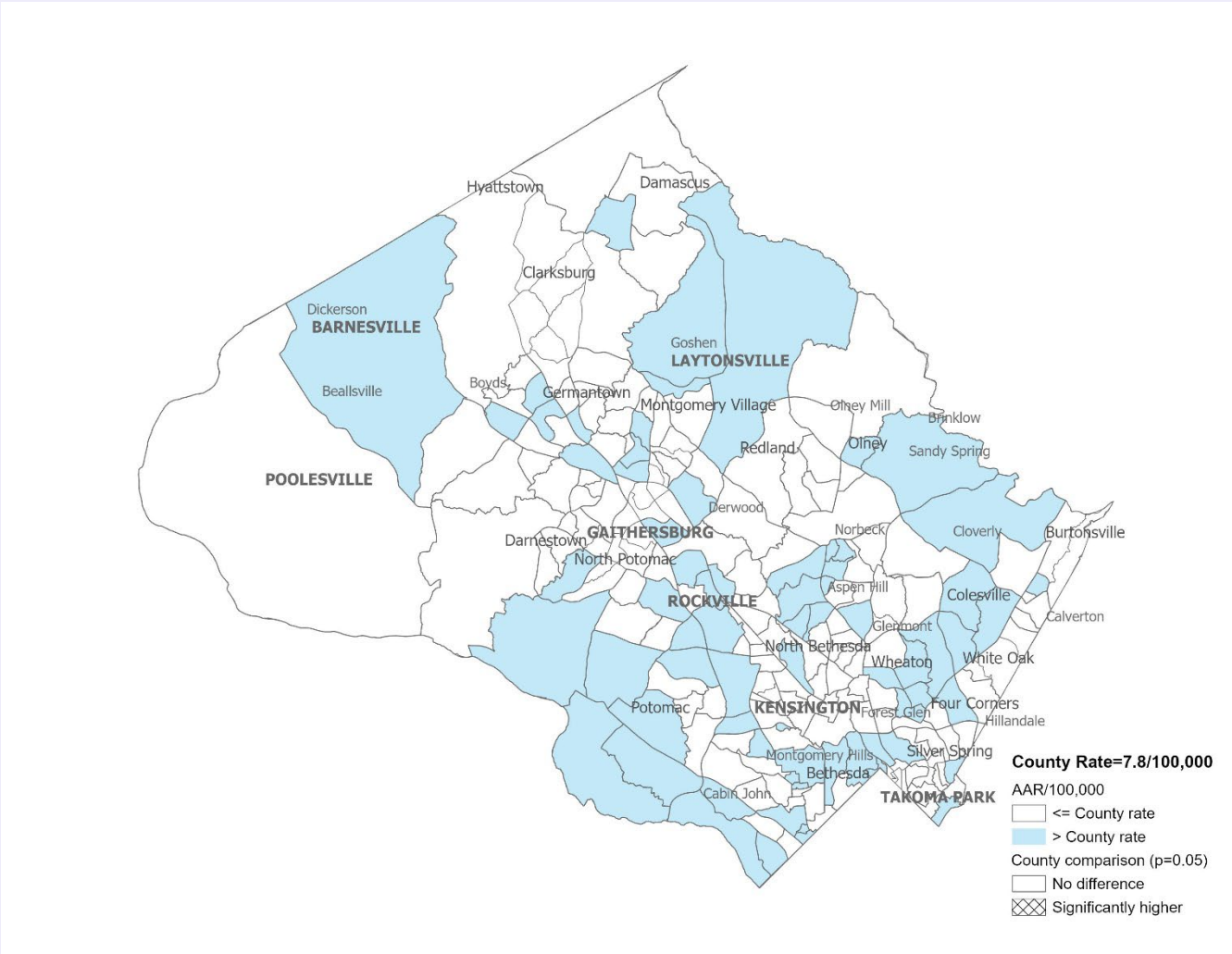


Figure 97. Cancer Age-Adjusted Mortality Rates by Race, Prostate, Montgomery County, 2014-18



Map 17. Cancer Age-Adjusted Mortality Rates by Census Tract, Prostate, Montgomery County, 2014-22



- Incidence of melanoma of skin in the County decreased between 2013 and 2018; the rate for the County is consistently lower than in Maryland and the U.S. (Figure 98).
- The mortality rate in the County followed similarly decreasing trends in Maryland and the U.S., though it fluctuated. County data is unavailable between 2014 and 2017 (Figure 99).
- Males had higher rates than females for both incidence and mortality (Figure 100 & Figure 101).

Figure 98. Cancer Age-Adjusted Incidence Rates, Melanoma of Skin, Montgomery County, Maryland, and US, 2013-18

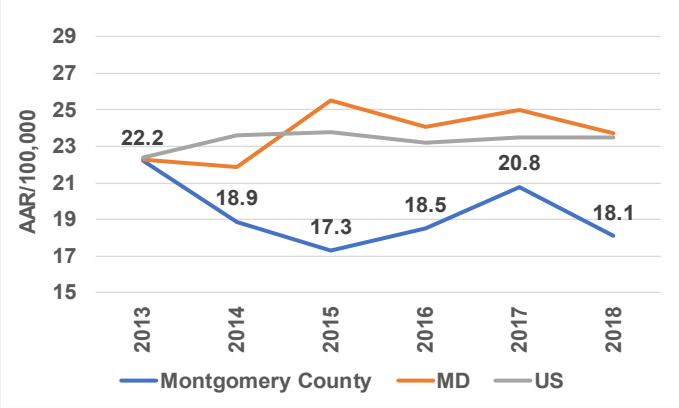


Figure 99. Cancer Age-Adjusted Mortality Rates, Melanoma of Skin, Montgomery County, Maryland, and US, 2013-18

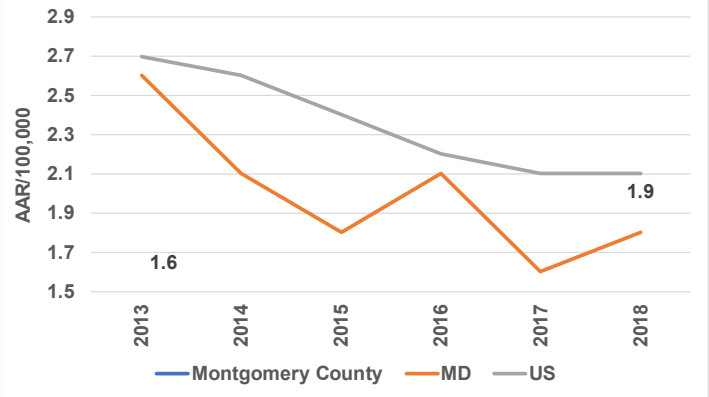


Figure 100. Cancer Age-Adjusted Incidence Rates by Sex, Melanoma of Skin, Montgomery County, 2014-18

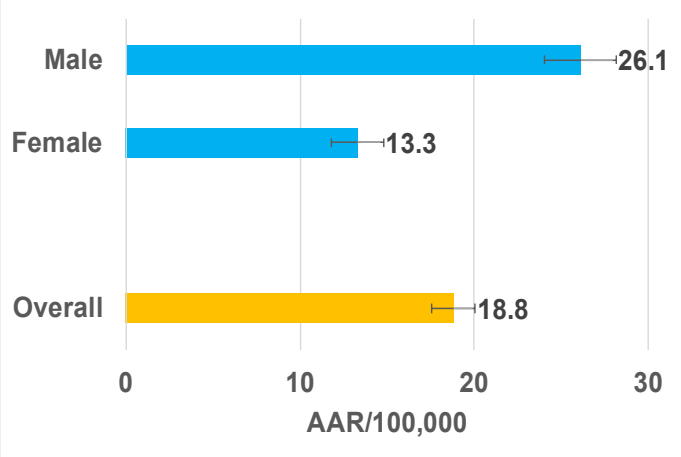
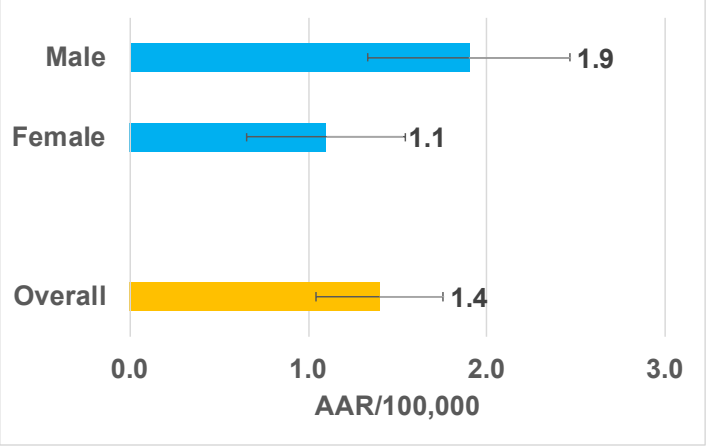


Figure 101. Cancer Age-Adjusted Mortality Rates by Sex, Melanoma of Skin, Montgomery County, 2014-18



MARYLAND BRFSS Behavioral Risk Factor Surveillance System

4.0% (95% CI: 3.3-4.6) adults age 18+ ever told have skin cancer in Montgomery County, as compared to 4.4% (95% CI: 4.1-4.7) in Maryland

Diabetes Mellitus

Diabetes is a serious, costly, and increasingly common chronic disease. Early detection, improved delivery of care, and better self-management are the key strategies for preventing much of the burden of diabetes.

Seven million persons aged 65 years or older (20.1% of all people in this age group) in the U.S. have diabetes, most of them type 2 diabetes. Diabetes is the 7th leading cause of death in Maryland (6th in Montgomery County) in 2022, and 6th leading cause of death for Blacks in both Maryland and Montgomery County.

In November 2019, Maryland Department of Health released the Maryland Diabetes Action Plan with action steps for organizations and partners to implement to prevent and manage diabetes in Maryland. The action steps are categorized using a system change model approach, working upstream to people at a healthy weight, then progressing as risk increases with those who are overweight and obese, followed by those who are prediabetic or with history of gestational diabetes, and also include actions to improve outcomes in those identified with diabetes and diabetes complications.

In Fiscal Year 2020, Montgomery County DHHS received a two-year grant award from the Maryland Community Health Resources Commission to implement the Predict – Link – Control T2D project that aims to decrease Type II diabetes-related emergency department use with a target reduction of 10% and establish a Chronic Disease Coalition. The Local Health Improvement Coalition (LHIC) staff will also use the funds to complete the Decision-making Education for Choices in Diabetes Everyday (DECIDE) Facilitator training. In addition, LHIC staff received technical assistance from the University of Maryland School of Public Health.

- Diabetes mortality rates in Montgomery County decreased up to 2018 and fluctuated 2019-2022; diabetes mortality in the County is consistently lower than that of Maryland and the U.S. (Figure 102).
- NH-Blacks had the highest diabetes mortality when compared with other population subgroups; males had higher mortality than females (Figure 103).
- Residents aged 65 and older had the highest diabetes mortality, followed by those aged 35-64 (Figure 104).

Figure 102. Diabetes Age-Adjusted Mortality Rates, Montgomery County, Maryland and U.S., 2013-22

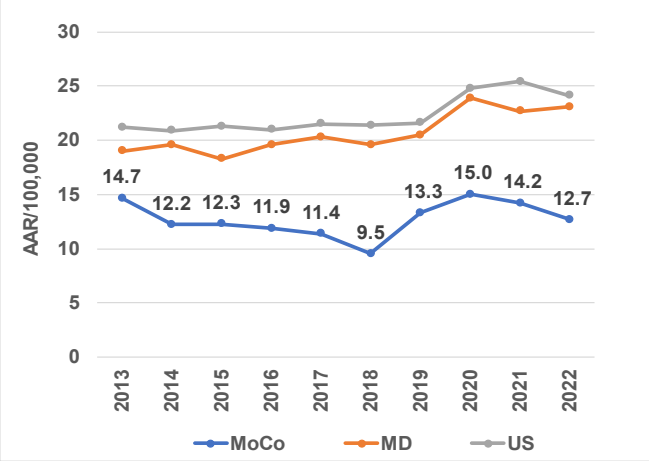
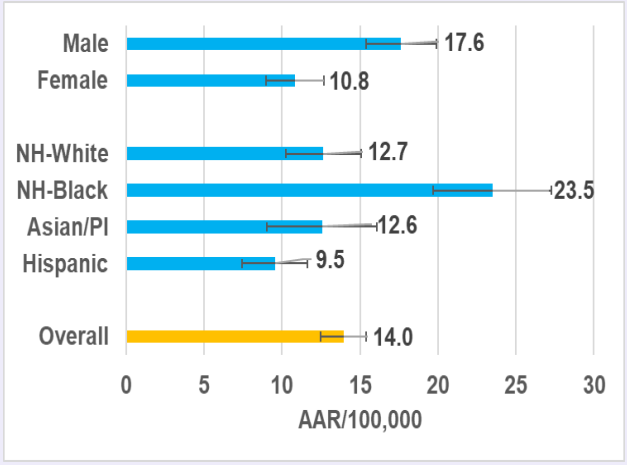


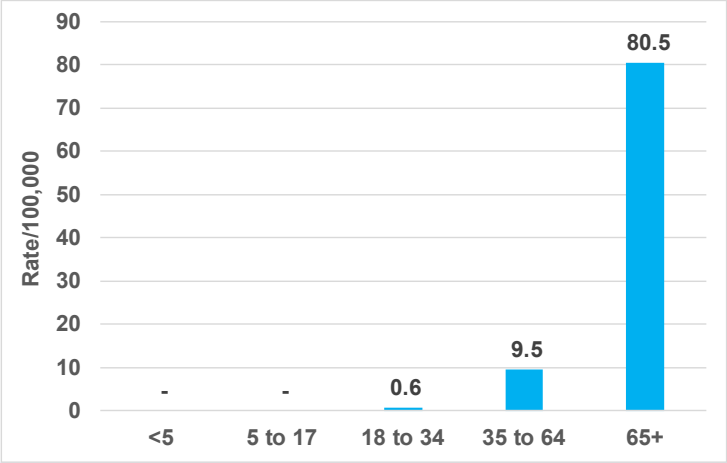
Figure 103. Diabetes Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



13.8/100,000

Health inequity (NH-Whites as reference) increased over time for Hispanics

Figure 104. Diabetes Mortality Rates by Age, Montgomery County, 2020-22



- Diabetes ER visit rates increased over time until 2019 when it began to decrease, similar to those in Maryland; the rates in the County were consistently lower than Maryland (Figure 105).
- Among population subgroups, NH-Blacks had the highest diabetes ER visit rates, followed by Hispanics, NH-Whites, and Asian/PI; males had a higher rate compared to females (Figure 106).
- Diabetes ER visits rates increased with age; people aged 65 and older had the highest rate (Figure 107).

Figure 105. Diabetes Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

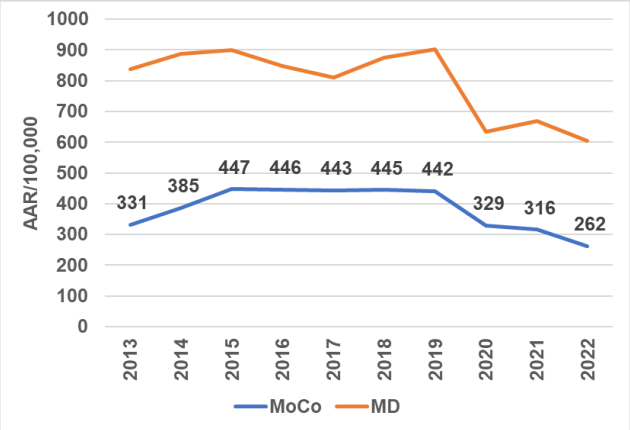
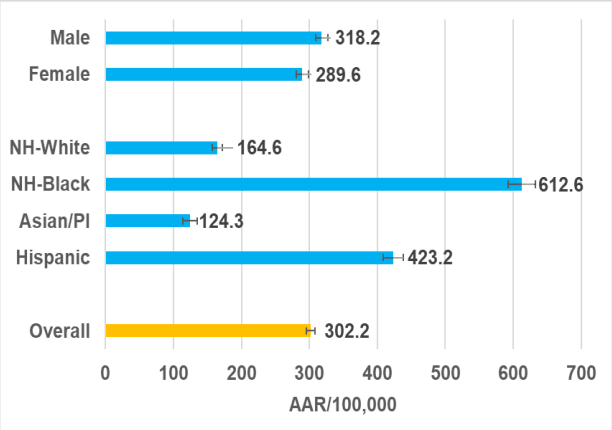


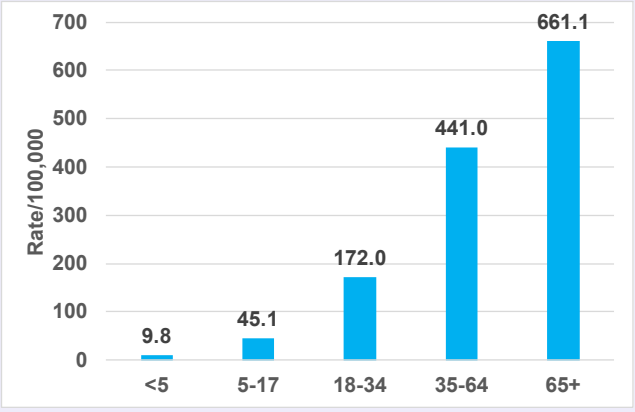
Figure 106. Diabetes Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



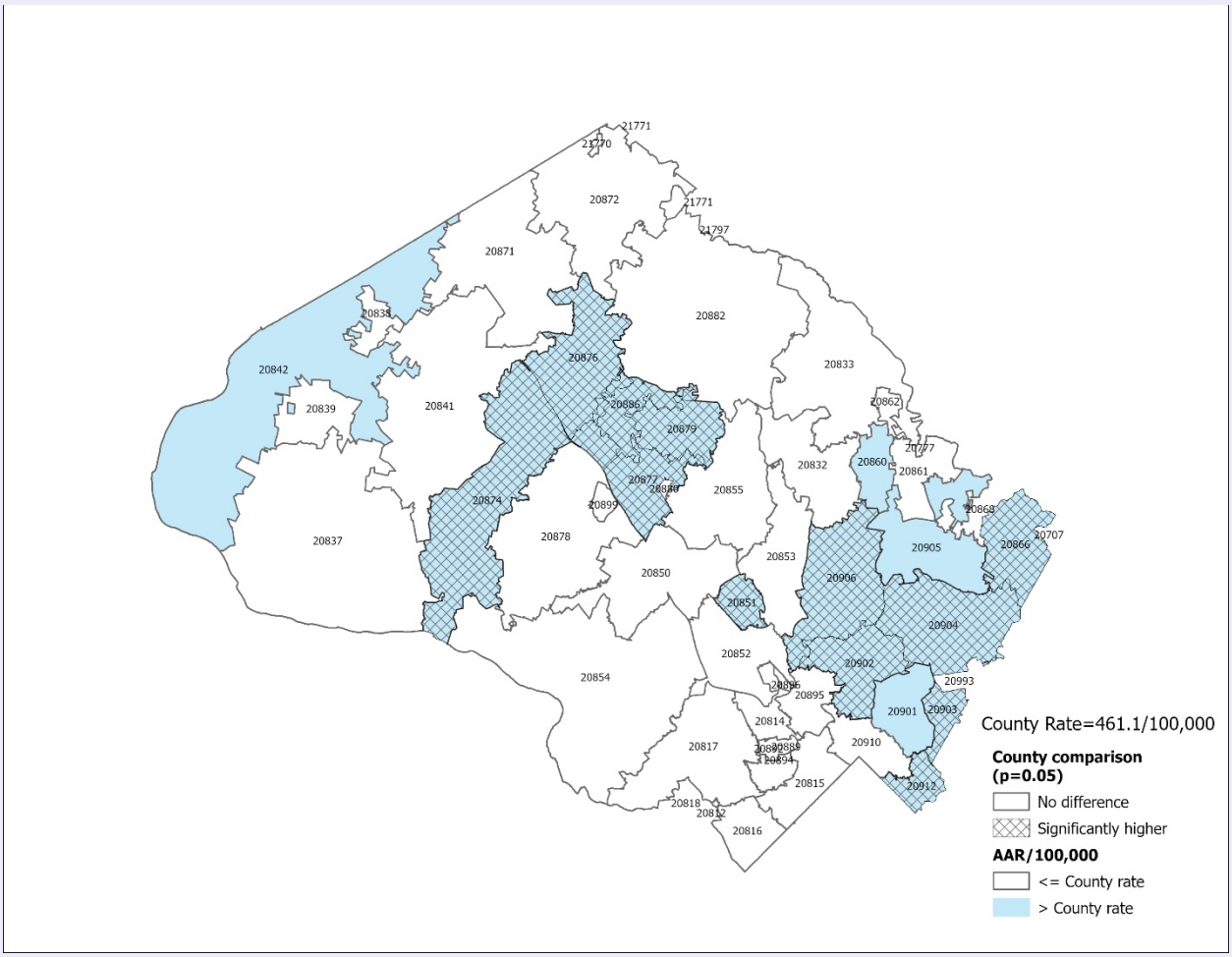
255.5/100,000

Health inequity (NH-Whites as reference) increased over time for Hispanics

Figure 107. Diabetes Related ER Visit Rates by Age, Montgomery County, 2020-22



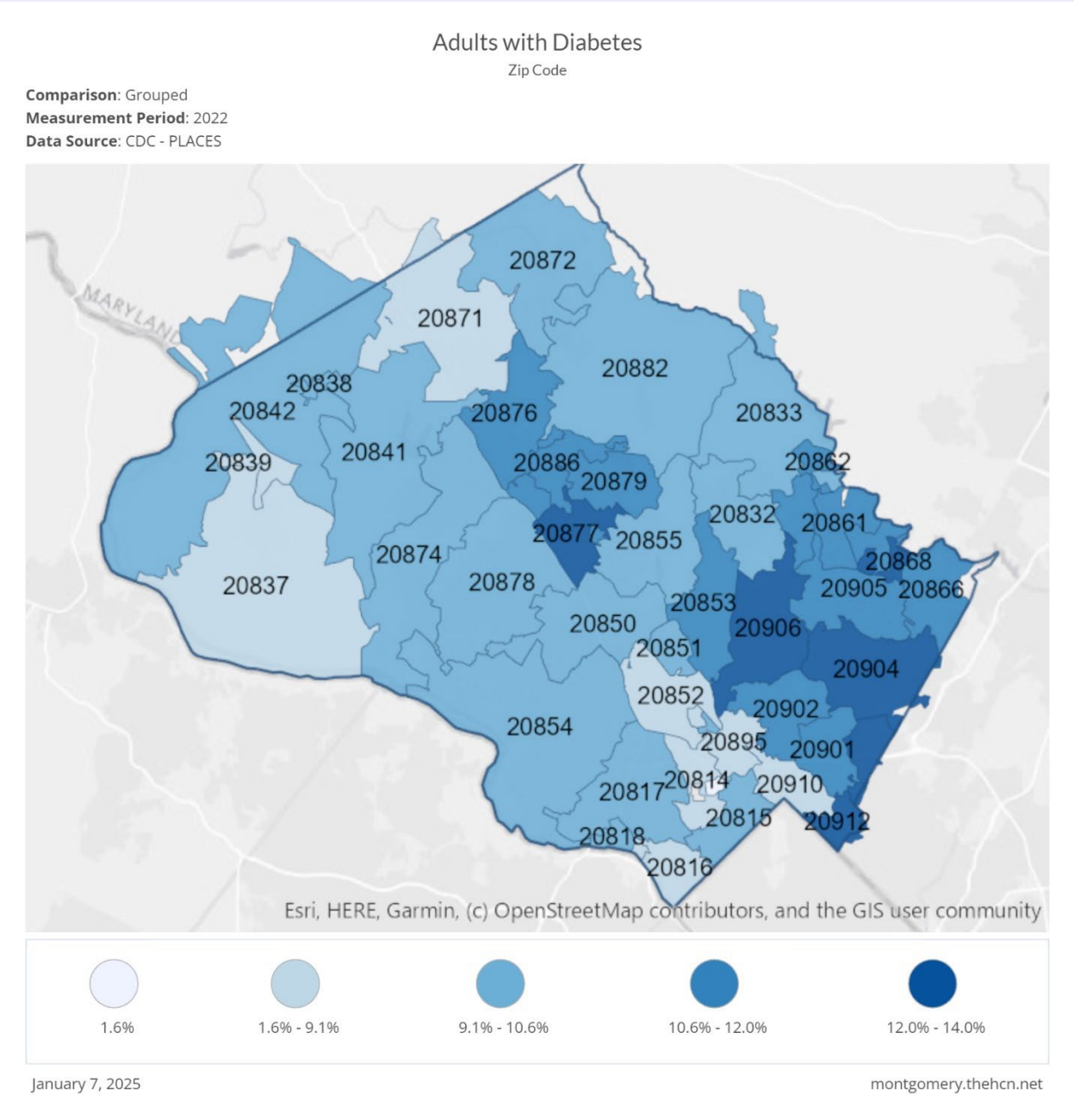
Map 18. Diabetes Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



MARYLAND BRFSS Behavioral Risk Factor Surveillance System

7.1% (95% CI: 5.7-8.5) adults age 18+ ever told have diabetes in Montgomery County, as compared 9.8% (95% CI: 9.2-10.4) in Maryland.

Map 19. Prevalence of Adults with Diabetes by Zip Code, Montgomery County, 2022



Infectious Disease

Infectious diseases are disorders caused by organisms such as bacteria, viruses, fungi or parasites. Many organisms live in and on our bodies. They are normally harmless or even helpful, but under certain conditions, some organisms may cause disease. Some infectious diseases can be passed from person to person. Some are transmitted by bites from insects or animals; others are acquired by ingesting contaminated food or water or through environmental exposures.

Some examples of infectious disease include influenza, tuberculosis, sexually transmitted infections (STIs), and HIV. Infectious diseases can affect anyone, but certain factors may increase risk for some individuals. People with suppressed or compromised immune system, young children, pregnant people, unvaccinated people, and adults over 60 are more vulnerable to the diseases.

Signs and symptoms vary depending on the organism causing the infection, but often include fever and fatigue. Mild infections may respond to rest and home remedies, while some life-threatening infections may require hospitalization. Many infectious diseases, such as measles and chickenpox, can be prevented by vaccines. Frequent and thorough handwashing also helps protect against many infectious diseases [31]. Some other ways to help prevent infectious diseases include covering your nose and mouth when sneezing or coughing, disinfecting frequently touched surfaces in your home and workplace, and avoiding contact with others when you or others are sick with an infectious disease.

Reportable Diseases

- Campylobacteriosis had an increasing trend in Montgomery County up to 2018, then decreased and increased again 2019-2022; the rate in the County was consistently higher than for Maryland (Figure 108).
- Salmonellosis had an increasing trend in Montgomery County, though the rate fluctuated over time. The County rate was consistently lower than that of Maryland and the U.S. until 2020 (Figure 109).
- Vibriosis rates in Montgomery County fluctuated over time, lower than Maryland but higher than the U.S. rate (Figure 110).
- Legionellosis had a decreasing trend in Montgomery County, the rate fluctuates overtime. County rates were consistently lower than those in Maryland (Figure 111).
- Pertussis had a decreasing trend in Montgomery County, the rates were consistently higher than in Maryland but lower than the U.S. (Figure 112).
- Rabies infection rates in animals fluctuated over time in Montgomery County; the county rates were consistently lower than in Maryland but higher than the U.S. rates (Figure 113).
- Lyme Disease infection rates fluctuated over time in Montgomery County, the rates were consistently lower than in Maryland. higher than the U.S. (Figure 114).
- Shiga Toxin Producing *E. Coli* infection rates fluctuated over time in Montgomery County (Figure 115).

Figure 108. Incidence Rates, Campylobacteriosis, Montgomery County, Maryland, and U.S., 2013-22

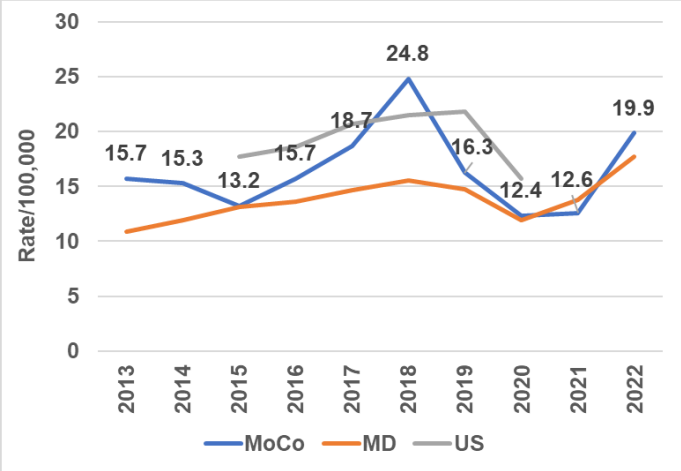


Figure 109. Incidence Rates, Salmonellosis, Montgomery County, Maryland, and U.S., 2013-22

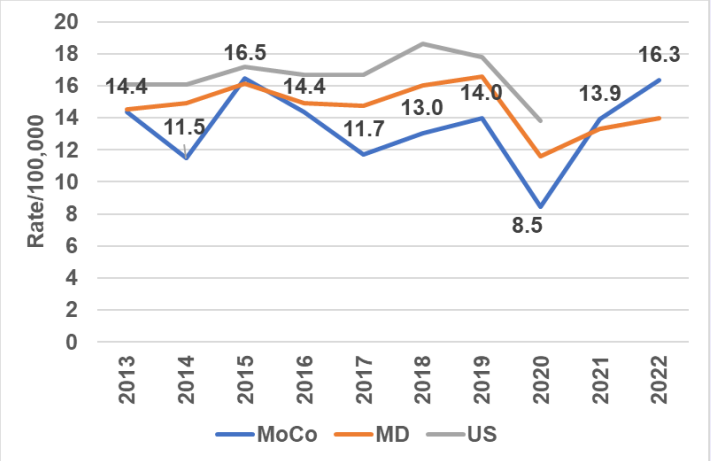


Figure 110. Incidence Rates, Vibriosis, Montgomery County, Maryland, and U.S., 2013-22

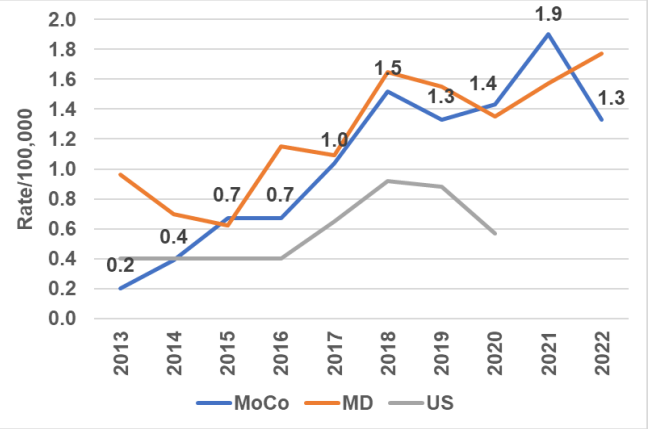


Figure 111. Incidence Rates, Legionellosis, Montgomery County, Maryland, and U.S., 2013-22

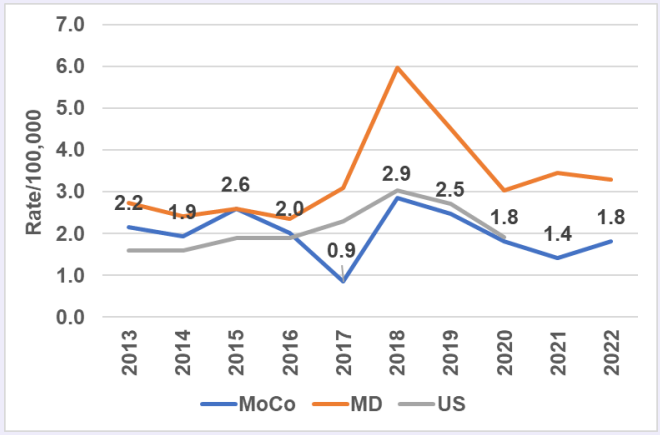


Figure 112. Incidence Rates, Pertussis, Montgomery County, Maryland, and U.S., 2013-22

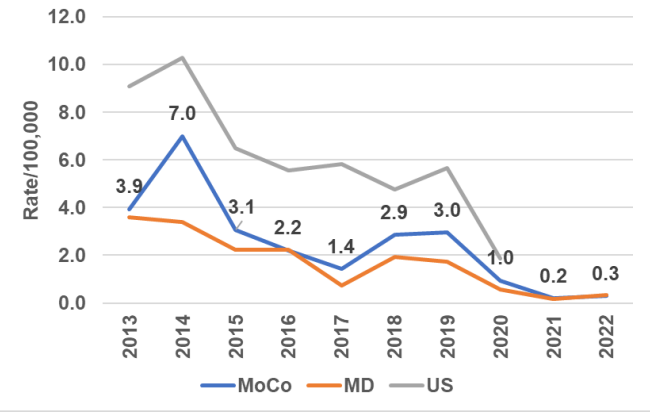


Figure 113. Incidence Rates, Rabies-Animal, Montgomery County, Maryland, and U.S., 2013-22

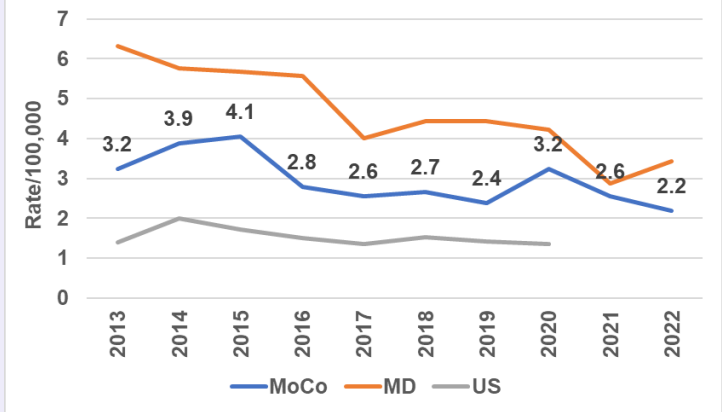


Figure 114. Incidence Rates, Lyme Disease, Montgomery County, Maryland, and U.S., 2013-22

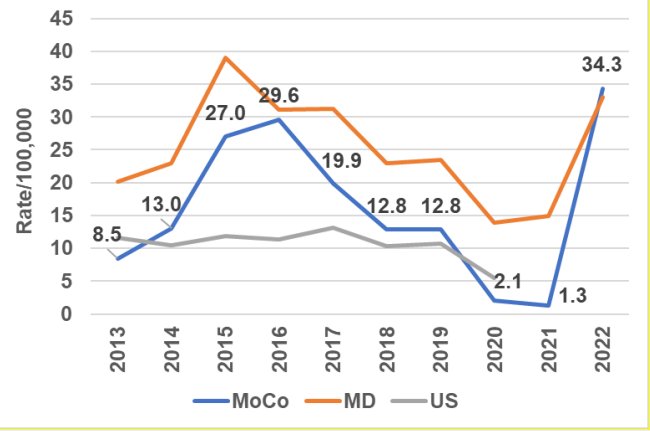
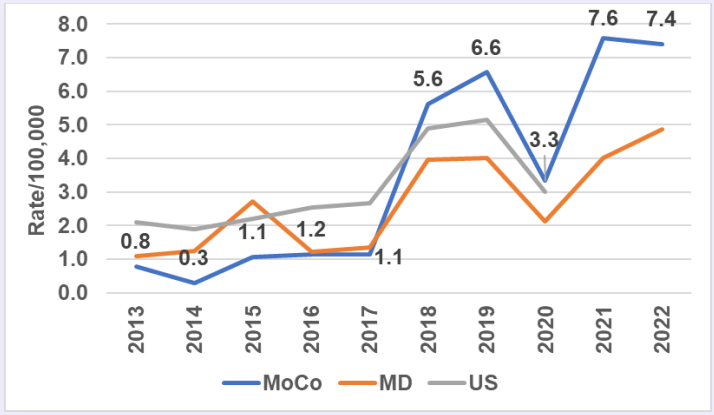


Figure 115. Incidence Rates, Shiga Toxin Producing E. Coli, Montgomery County, Maryland, and U.S., 2013-22



*CSTE case definition changed in 2018

COVID-19

- Crude case rates of COVID-19 in Montgomery County increased from the start of the pandemic in 2020 through 2022 (Figure 116). Both Montgomery County and the state of Maryland experienced lower case rates than the U.S.
- Among population subgroups, Hispanic and NH-Black had the highest COVID-19 case rates (Figure 117). Females had higher rates than males.
- Residents aged 18-34 had the highest case rates compared to other subgroups (Figure 118).

Figure 116. Figure 118. Incidence Rates by Age, COVID-19, Montgomery County, 2020-22

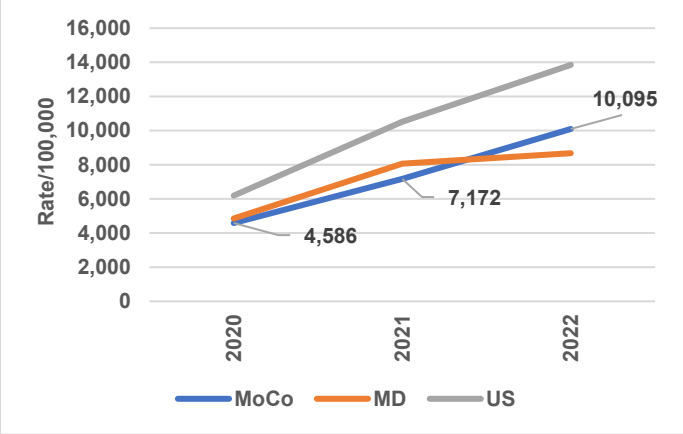


Figure 117. Incidence Rates by Sex and Race/Ethnicity, COVID-19 Montgomery County, 2020-22

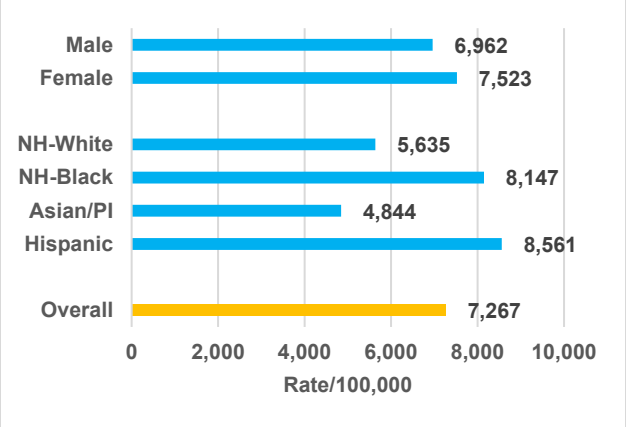
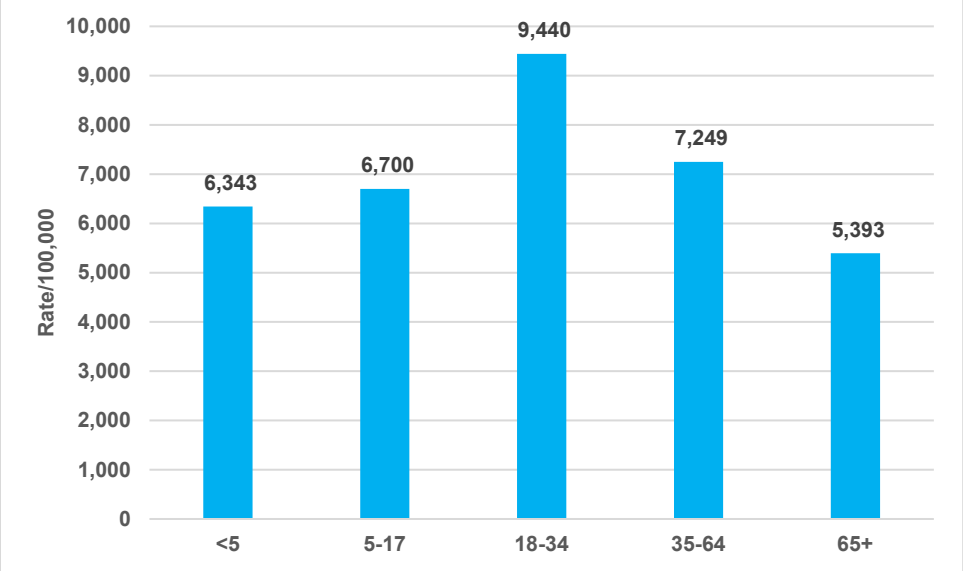
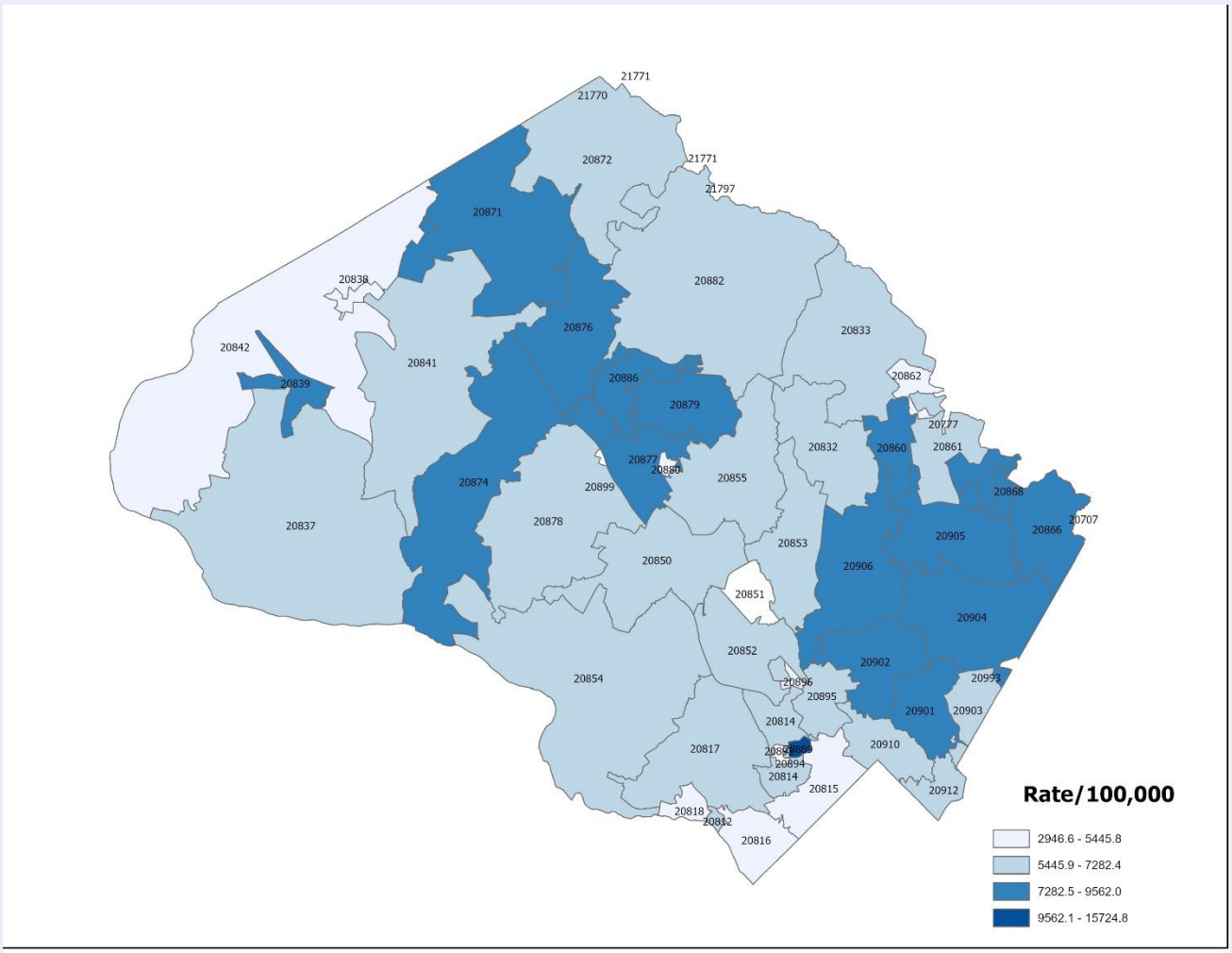


Figure 118. Incidence Rates by Age, COVID-19, Montgomery County, 2020-22



Map 20. Incidence Rates by Zip Code, COVID-19, Montgomery County, 2020-22



Tuberculosis

- Tuberculosis rates fluctuated over time in Montgomery County; the rates were consistently higher than Maryland and the U.S. In 2020, the county met the Healthy Montgomery 2023 goal for Tuberculosis incidence (Figure 119).
- Among population subgroups, Asian/PI had the highest tuberculosis rates, followed by NH-Black, Hispanic, and NH-White; Males have slightly higher rates than females (Figure 120).
- Residents aged 65 years and older had the highest Tuberculosis rates, followed by age 25-44. (Figure 121).

Figure 119. Incidence Rates, Tuberculosis, Montgomery County, Maryland, and U.S., 2014-2022

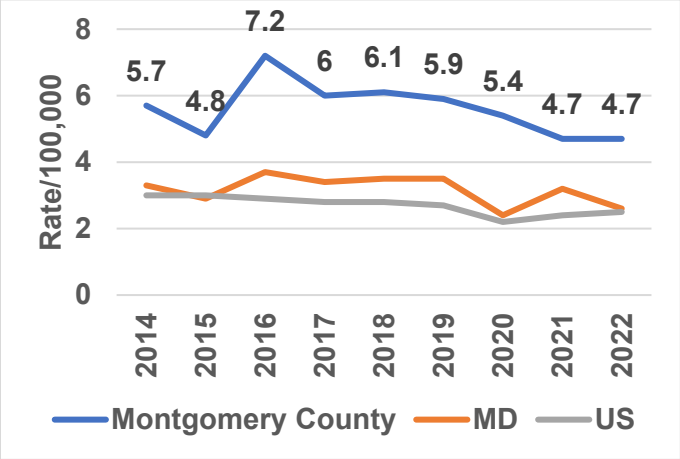
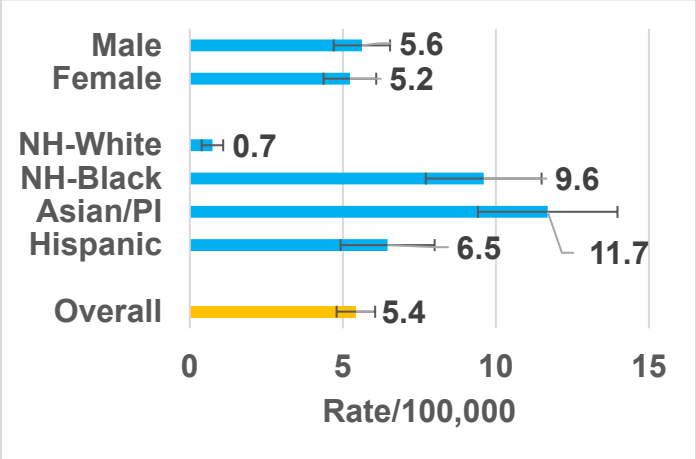


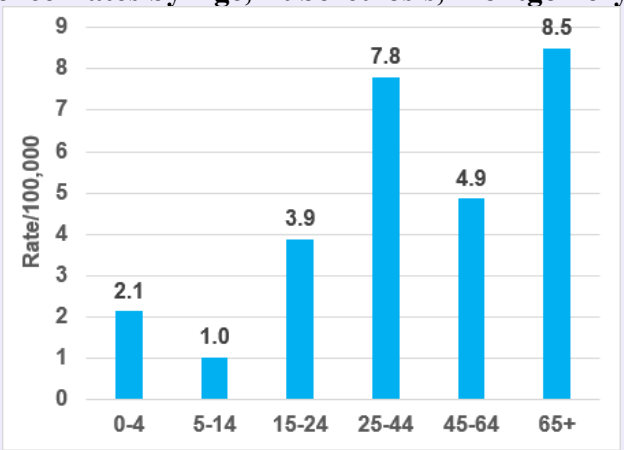
Figure 120.Incidence Rates by Sex and Race/Ethnicity, Tuberculosis, Montgomery County, 2018-22



4.1/100,000

Health inequity (NH-Whites as reference) increased over time for NH-Blacks, Asian/PIs, and Hispanics

Figure 121. Incidence Rates by Age, Tuberculosis, Montgomery County, 2018-22



Sexually Transmitted Infections (STI)

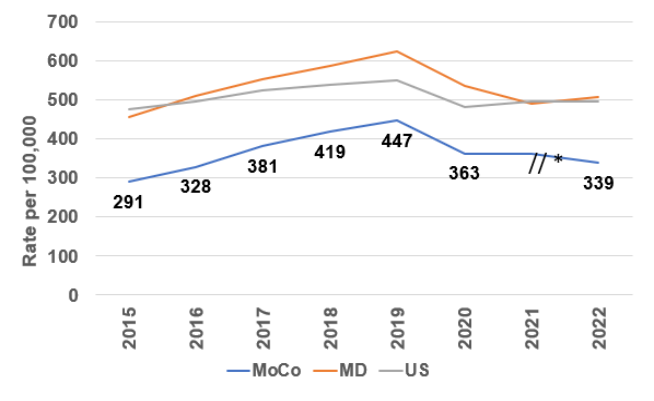
Table 21. Incidence by Sex and Race/Ethnicity, Selected Sexually Transmitted Infections, Montgomery County, 2018-2022*

	Total	Sex		Race/Ethnicity**			
		Male	Female	NH-White	NH-Black	Asian/PI	Hispanic
Chlamydia	16,499	5,749 (35.0%)	10,702 (65.1%)	1,804 (20.9%)	3,727 (43.2%)	447 (5.2%)	2,655 (30.8%)
Gonorrhea	3,262	2,234 (69.0%)	999 (30.9%)	462 (21.7%)	1209 (56.7%)	69 (3.2%)	393 (18.4%)
Syphilis	951	799 (84.0%)	152 (16.0%)	197 (21.8%)	365 (40.4%)	45 (5.0%)	296 (32.8%)
HIV	431	292 (67.7%)	139 (32.2%)	51 (12.7%)	264 (65.7%)	N/A	87 (21.6%)

*2021 STI data not available due to MDH Network Security Incident
**Do not equal grand total due to missing race/ethnicity data

- Chlamydia infection rates increased up to 2019 then decreased (likely due to COVID-19 pandemic) in Montgomery County; however, the rates in the County were consistently lower than in Maryland and the U.S. (Figure 122).
- Among population subgroups, NH-Black had the highest chlamydia infection rates, followed by Hispanic, NH-White and Asian/PI; females had higher rates than males (Figure 123). Since high percentages of race/ethnicity information are missing, cautions should be exercised to interpret comparisons.
- Ages 20-24 had the highest chlamydia infection rates, followed by ages 15-19, and ages 25-44 (Figure 124).

Figure 122. Incidence Rates, Chlamydia, Montgomery County, Maryland, and U.S., 2015-2022



353.8/100,000

Figure 123. Incidence Rates by Sex and Race/Ethnicity, Chlamydia, Montgomery County, 2018-2022

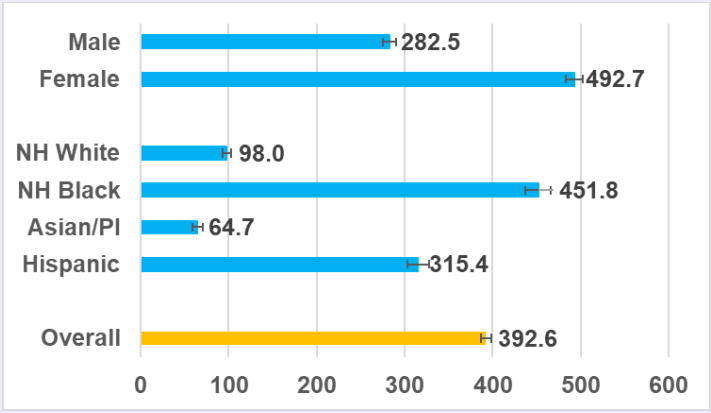
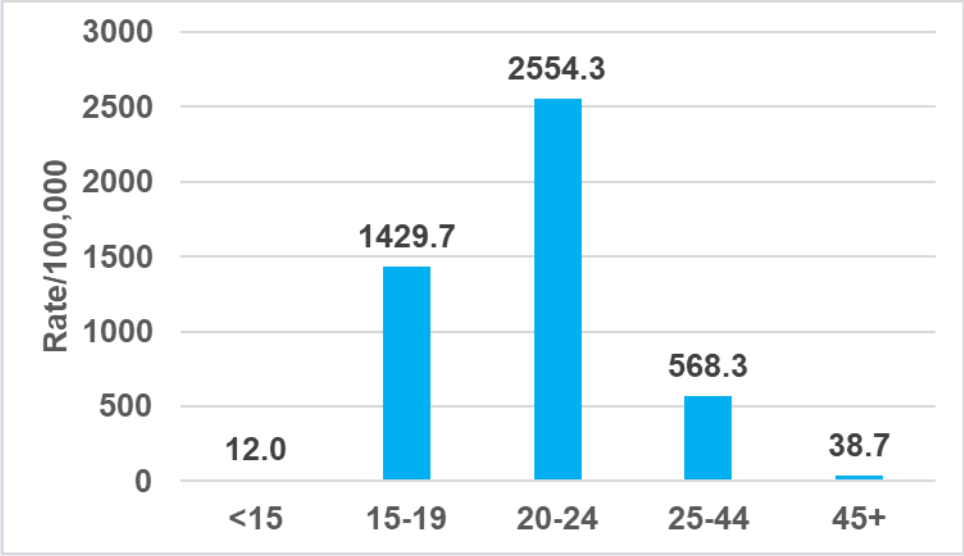
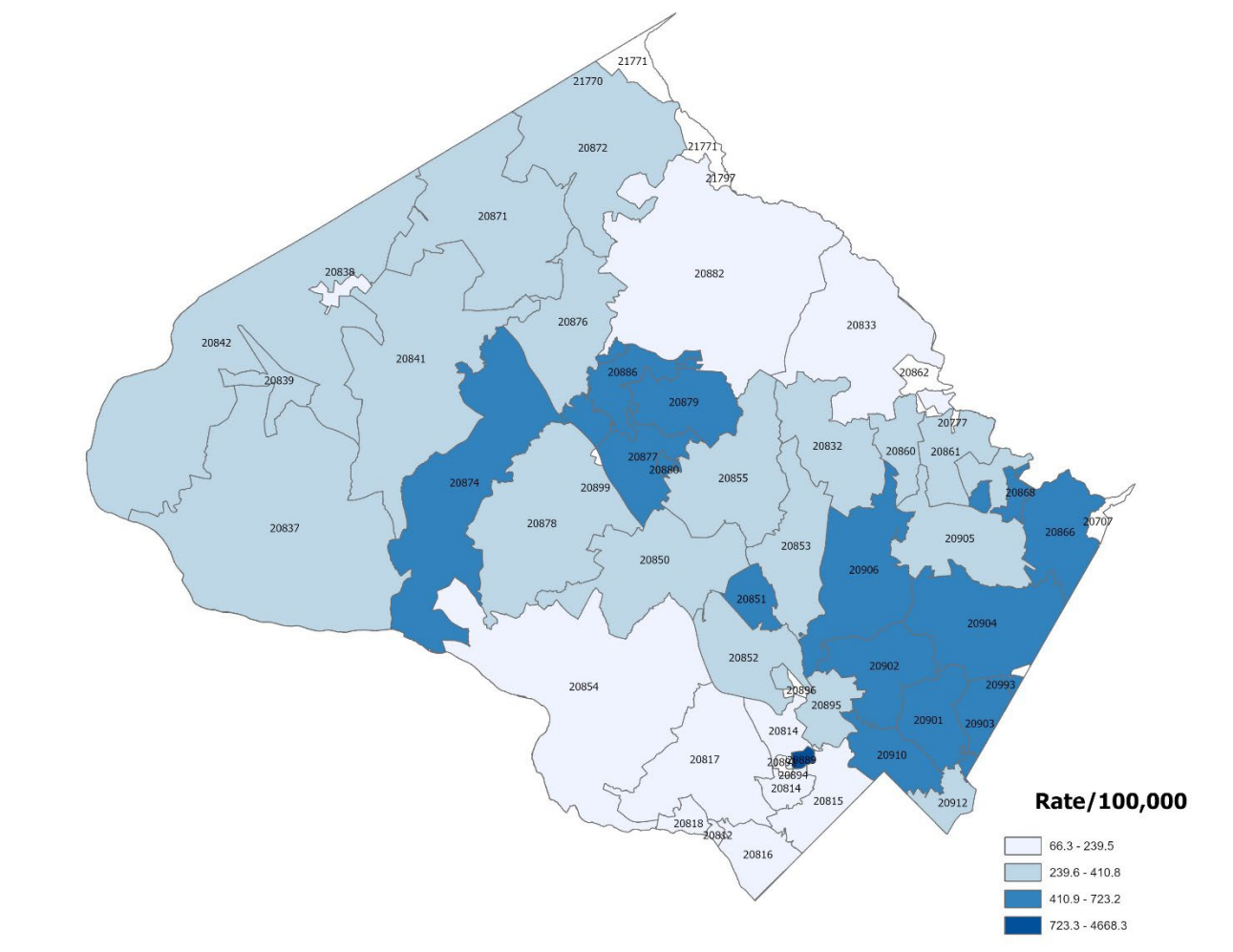


Figure 124. Incidence Rates by Age, Chlamydia, Montgomery County, 2018-2022



Map 21. Incidence Rates by Zip Code, Chlamydia, Montgomery County, 2018-22



- Gonorrhea infection rates had an overall increase over time in Montgomery County, similar to that in Maryland and the U.S.; however, the rates in the County were consistently lower than Maryland and the U.S. (Figure 125).
- Among population subgroups, NH-Blacks had the highest gonorrhea infection rates, followed by Hispanics and NH-Whites; females have higher rates than males (Figure 126).
- Those age 25-44 had the highest gonorrhea rates, followed by age 20-24, and age 15-19 (Figure 127).

Figure 125. Incidence Rates, Gonorrhea, Montgomery County, Maryland, and U.S., 2015-2022

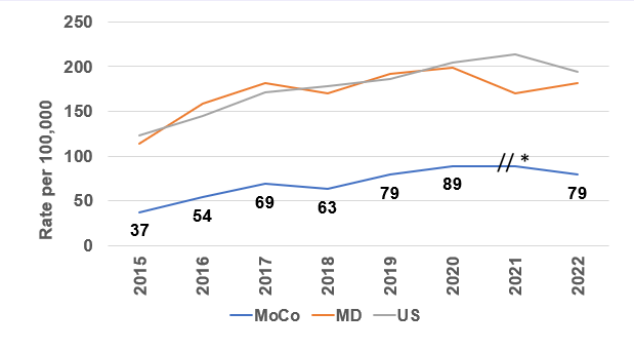
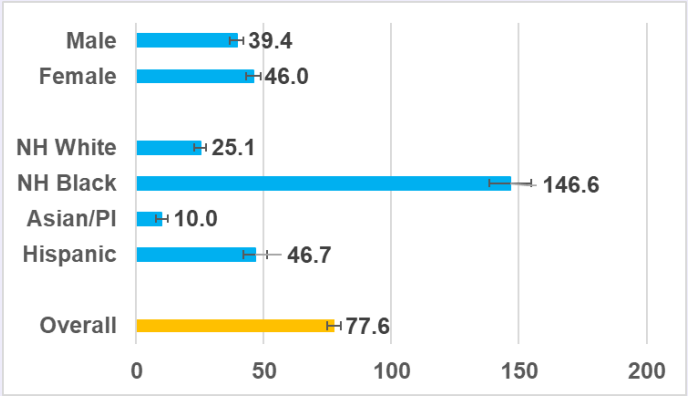
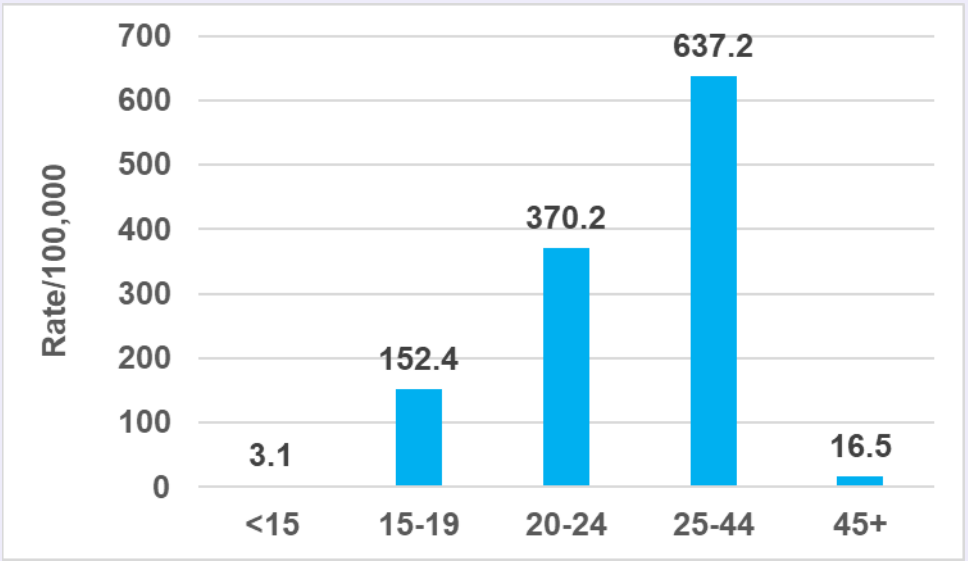


Figure 126. Incidence Rates by Sex and Race/Ethnicity, Gonorrhea, Montgomery County, 2018-2022

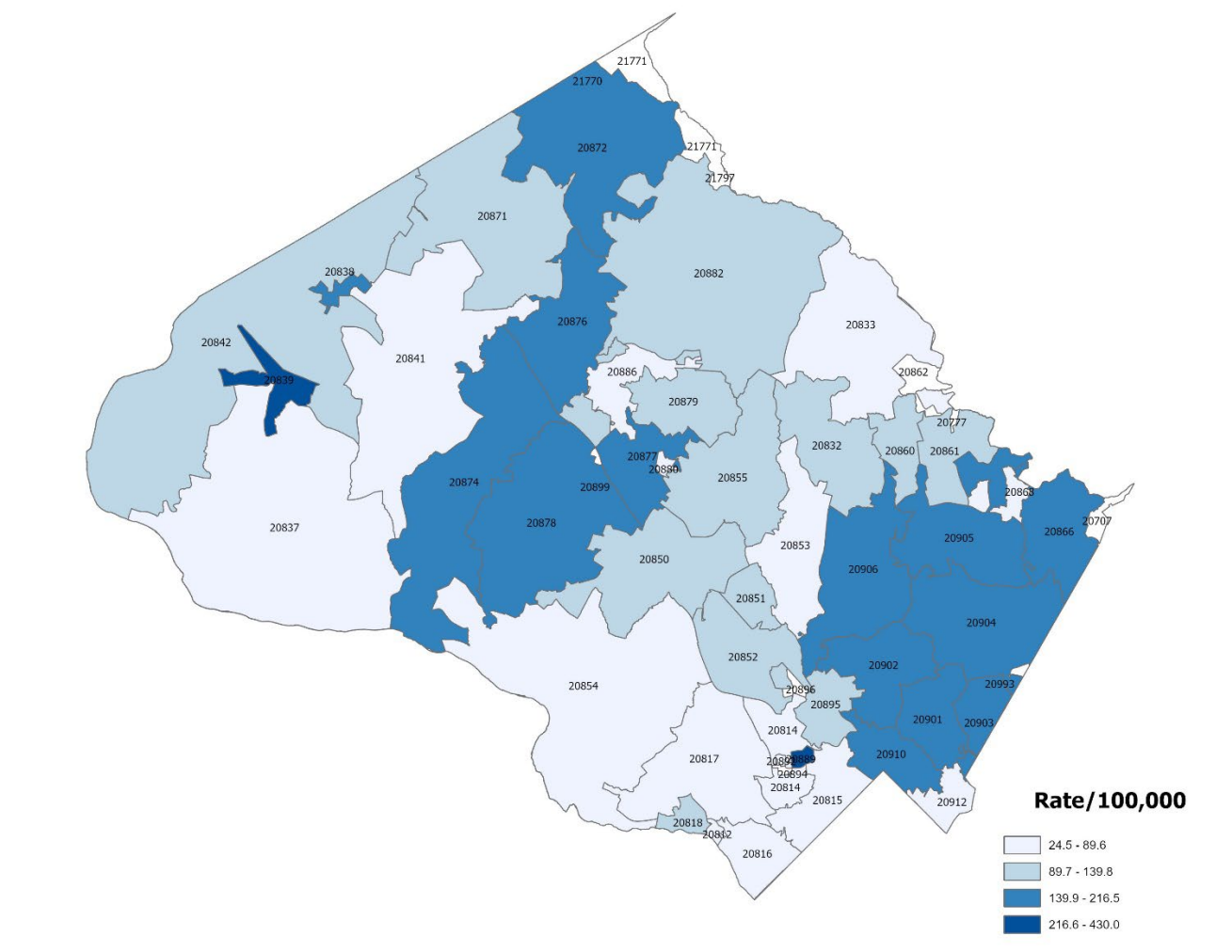


86.8/100,000

Figure 127. Incidence Rates by Age, Gonorrhea, Montgomery County, 2018-2022

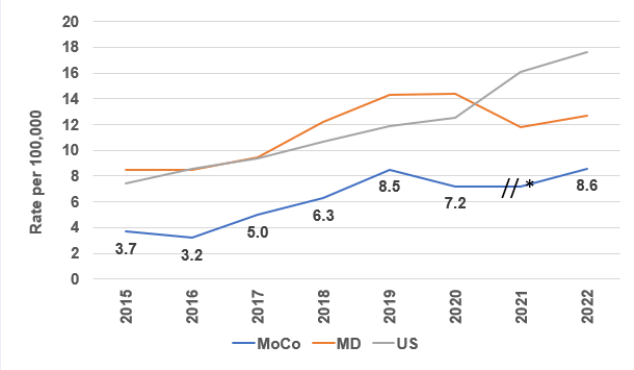


Map 22. Incidence Rates by Zip Code, Gonorrhea, Montgomery County, 2018-22



- Syphilis infection rates increased over time in Montgomery County, similar to those in Maryland and the U.S.; however, the rates in the County were consistently lower than Maryland and the U.S. (Figure 128).
- Among population subgroups, NH-Blacks had the highest syphilis infection rates, followed by Hispanics and NH-Whites; males had rates more than five times higher than females (Figure 129).
- Those ages 20-24 had the highest syphilis rates, followed by age 25-44 and age 45+ (Figure 130).

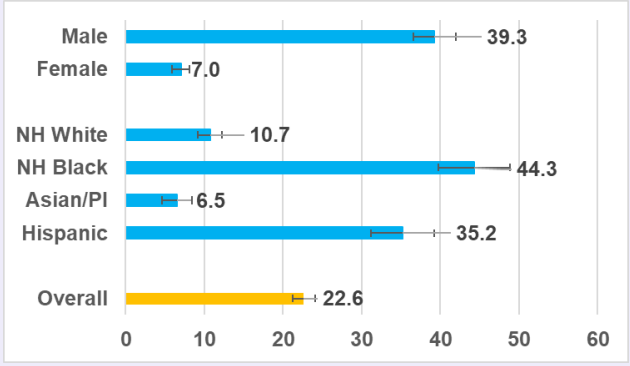
Figure 128. Incidence Rates, Syphilis, Montgomery County, Maryland, and U.S., 2015-2022



healthy montgomery 2030

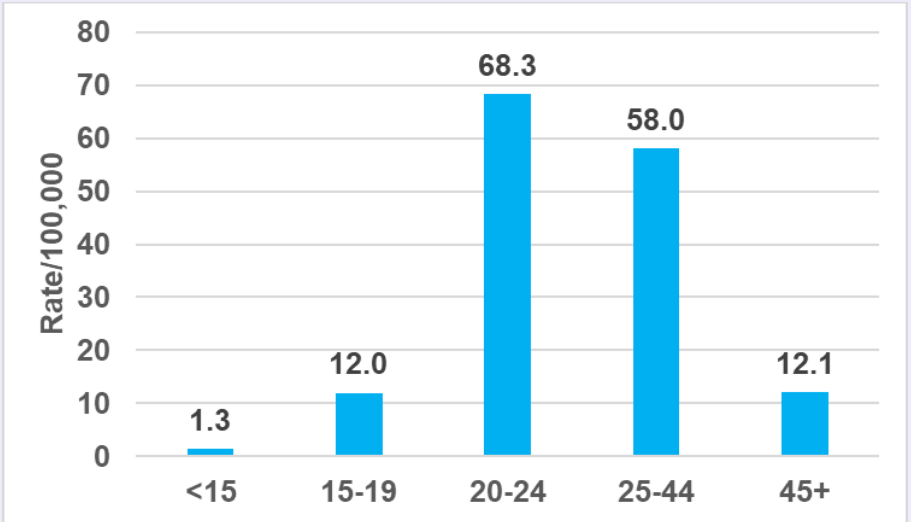
7.0/100,000

Figure 129. Incidence Rates by Sex and Race/Ethnicity, Syphilis, Montgomery County, 2018-2022



Health inequity (NH-Whites as reference) increased over time for NH-Blacks, Asian/PIs, and Hispanics

Figure 130. Incidence Rates by Age, Syphilis, Montgomery County, 2018-2022



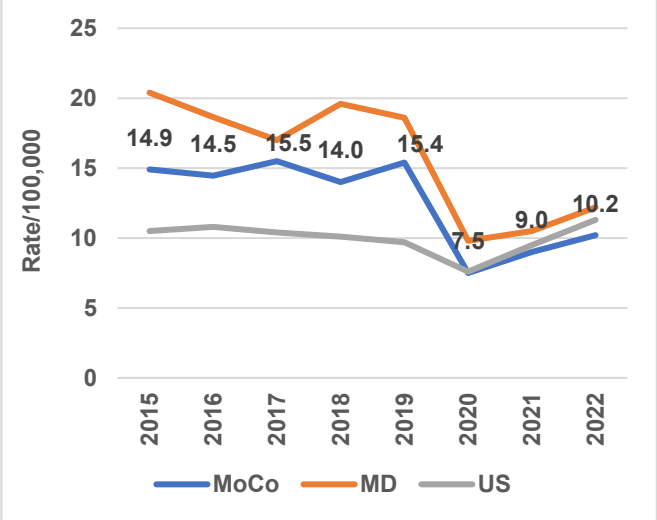
Healthy People 2030

471.2 Gonorrhea cases per 100,000 males
4.6 Syphilis cases per 100,000 females
67.5% of sexually active females aged 16-24 screened for Chlamydia

HIV

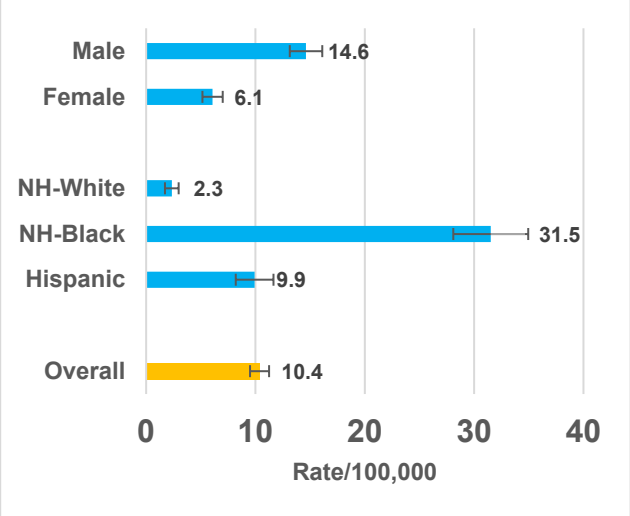
- HIV rates decreased over time in Montgomery County until 2020 then increased back up (likely due to COVID-19 pandemic), similar to those in Maryland and the U.S.; the rates in the County were consistently lower than Maryland but higher than the U.S. (Figure 131).
- Among population subgroups, NH-Blacks had the highest HIV rates, followed by Hispanic, and NH-White; males had higher rates than females (Figure 132).

Figure 131. Incidence Rates, HIV, Montgomery County, Maryland, and U.S., 2015-22



9.5/100,000

Figure 132. Incidence Rates by Sex and Race/Ethnicity, HIV, Montgomery County, 2018-22



Health inequity (NH-Whites as reference) increased over time for NH-Blacks and Hispanics

3,835 persons aged 13+ newly diagnosed with HIV each year

95% of persons aged 13+ with newly diagnosed HIV infection linked to HIV medical care within 1 month of HIV diagnosis

Immunization

- Maryland had higher coverage rates for most required childhood immunizations than the U.S.; data at the County level are not available (Table 22).
- Maryland had higher coverage rates for HPV immunization among adolescents aged 13-17 years old than the U.S. since 2018; data at the County level are not available (Table 23).
- Among population subgroups, NH-White group had the highest coverage for adolescent HPV immunization, followed by NH-Black, Hispanic, and Asian/PI (Table 23).

Table 22. Immunization Coverage for Selected Vaccines by Age 24 Months, Maryland and U.S., 2020

	3+DTaP	3+Polio	1+MMR	3+Hib	3+HepB	1+Var	3+PCV	1+HepA	Rotavirus	Combined 7-vaccine series
MD	96.1±3.4	96.1±3.5	95.3±3.5	95.7±3.5	93.8±4.0	96.2±2.8	98.3±1.7	93.9±3.5	81.4±6.0	73.7±6.9
US	92.5±1.1	91.9±1.1	90.6±1.1	90.1±1.2	91.1±1.2	90.1±1.1	92±1.1	86.2±1.5	75.4±1.7	66.1±2.0

Table 23. Coverage with >=HPV Vaccine for Adolescents Aged 13-17 Years, Maryland and U.S., 2018-22

		2018	2019	2020	2021	2022
MD	Overall	74.7 (68.3-80.2)	78.9 (72.9-83.8)	83.1 (79.2-86.5)	85.5 (82.1-88.4)	84 (77.0-89.2)
	NH-White	73.2 (63.5-81.2)	86.2 (80.3-92.1)			
	NH-Black	76.0 (62.7-85.6)	76.8 (65.7-87.9)			
	Asian/PI	N/A	50.2 (24.7-75.7)			
	Hispanic	84.1 (70.2-92.2)	72.8 (55.3-90.3)			
US	Overall	68.1 (66.8-69.3)	71.5 (70.1-72.8)	75.1 (73.9-76.2)	76.9 (75.6-78.2)	76 (74.7-77.3)
	NH-White	63.5 (62.0-65.1)	68.3 (66.8-69.9)			
	NH-Black	72.8 (69.3-76.1)	72.0 (67.8-75.9)			
	Asian/PI	65.3 (56.5-73.2)	74.8 (68.1-80.5)			
	Hispanic	75.5 (72.7-78.2)	76.8 (73.3-79.9)			

Source: National Immunization Survey (NIS), Center for Disease Control and Prevention
https://www.cdc.gov/vaccines/imz-managers/coverage/nis/child/index.html
https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6933a1-H.pdf
https://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/data-reports/hpv/dashboard/2019.html

- Montgomery County maintained higher COVID-19 vaccination rates than both the state of Maryland and the U.S. as a whole (Figure 133).
- Among residents 5 years of age and older, females and Hispanic residents comprised a greater proportion of individuals receiving a COVID-19 vaccination compared to their population size than other subgroups (Figure 134).

Figure 133. Cumulative Percent Fully Vaccinated Among Residents 5+ by Date of Vaccine Administration, Montgomery County, MD, December 2020 - March 2022[1]

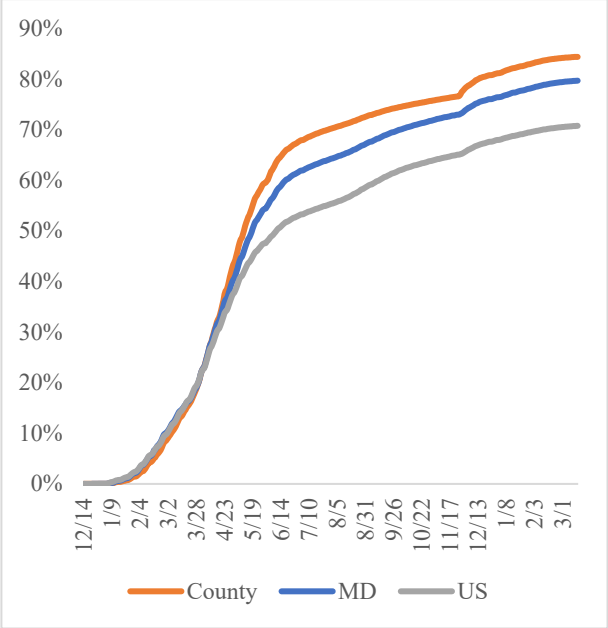
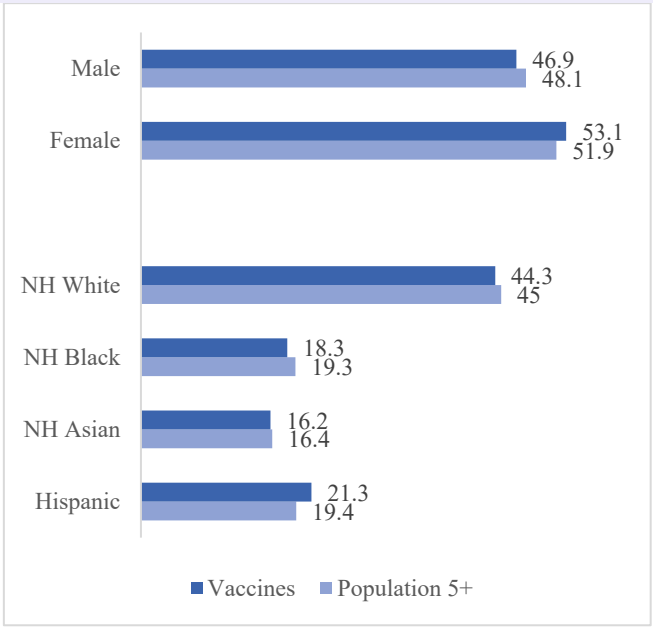


Figure 134. Percentage of Residents Receiving At Least One COVID-19 Vaccinations by Sex and Race/Ethnicity and Percentage of Resident Population 5+, Montgomery County, MD, December 2020 – March 2022



[1]Additional data pertaining to COVID-19 can be found in the County's COVID-19 Surveillance Report, 2020-2022.

MARYLAND BRFSS Behavioral Risk Factor Surveillance System

52.5% (95% CI: 49.1-55.9) adults age 18+ have flu vaccination in last 12 months in Montgomery County, as compared to 47.3% (95% CI: 46.0-48.6) in Maryland.

Behavioral Health

Behavioral health refers to a person's state of being and how their behaviors and choices affect their overall health and wellness. Behavioral health involves the interaction of mental health, emotional well-being, and behaviors. It integrates psychological, social, and environmental factors, and they play important roles in shaping individual and community health.

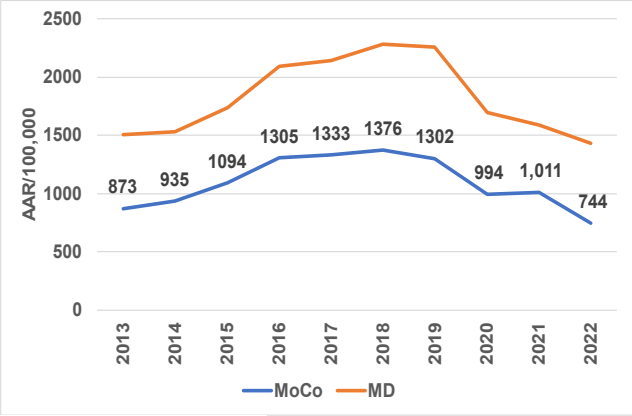
Behaviors such as exercise, diet, and stress management greatly contribute to overall health, however, behavioral health is influenced by other factors such as social determinants. Socioeconomic status, access to healthcare, and community safety impact behavioral health outcomes.

While some mental health issues may be impacted by behavior, many mental health disorders have neurological or biological causes that may not be cured by changing the person's behavior. Many patients visit the ER to seek support, but limited time, lack of trained providers, and limited privacy in ER pose great difficulties in providing adequate psychiatric assessments and optimal care [32]. Behavioral health overlaps with mental health, and although each has its own definitions [33-35], we cover the topic of mental health under the bigger umbrella of behavioral health in this report.

Mental Health

- Mental health related ER visit rates in the County decreased since 2018, which is consistent with those in Maryland; rates in the County were consistently lower than in Maryland (Figure 135).
- Among population subgroups, NH-Blacks had the highest mental health related ER visit rates, followed by NH-Whites, Hispanics, and Asians/PI; females had higher rates than males (Figure 136)
- Residents aged 18-34 had the highest ER visit rate, followed by those aged 5-17, and those aged 35-64 (Figure 137).

Figure 135. Mental Health Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22



725.4/100,000

Figure 136. Mental Health Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

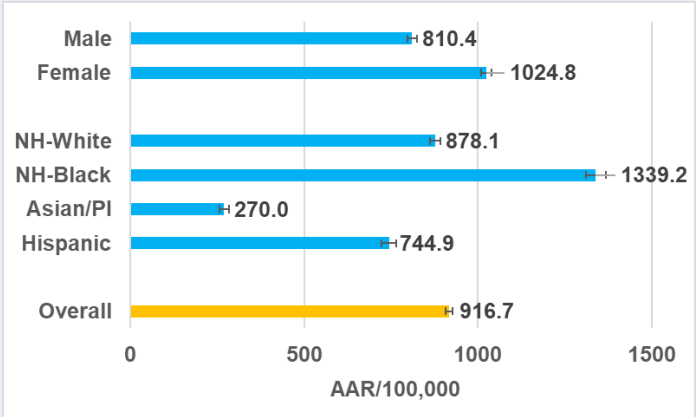
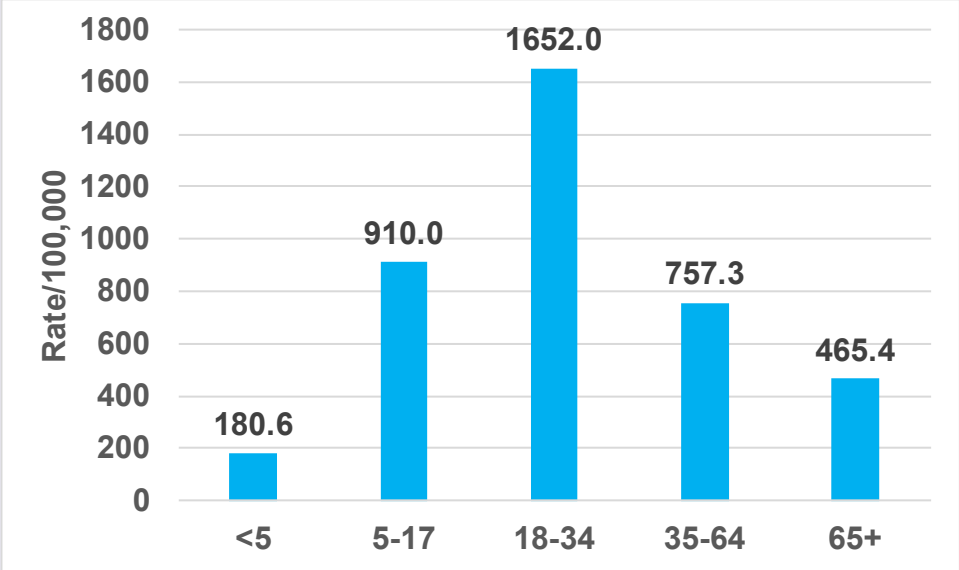
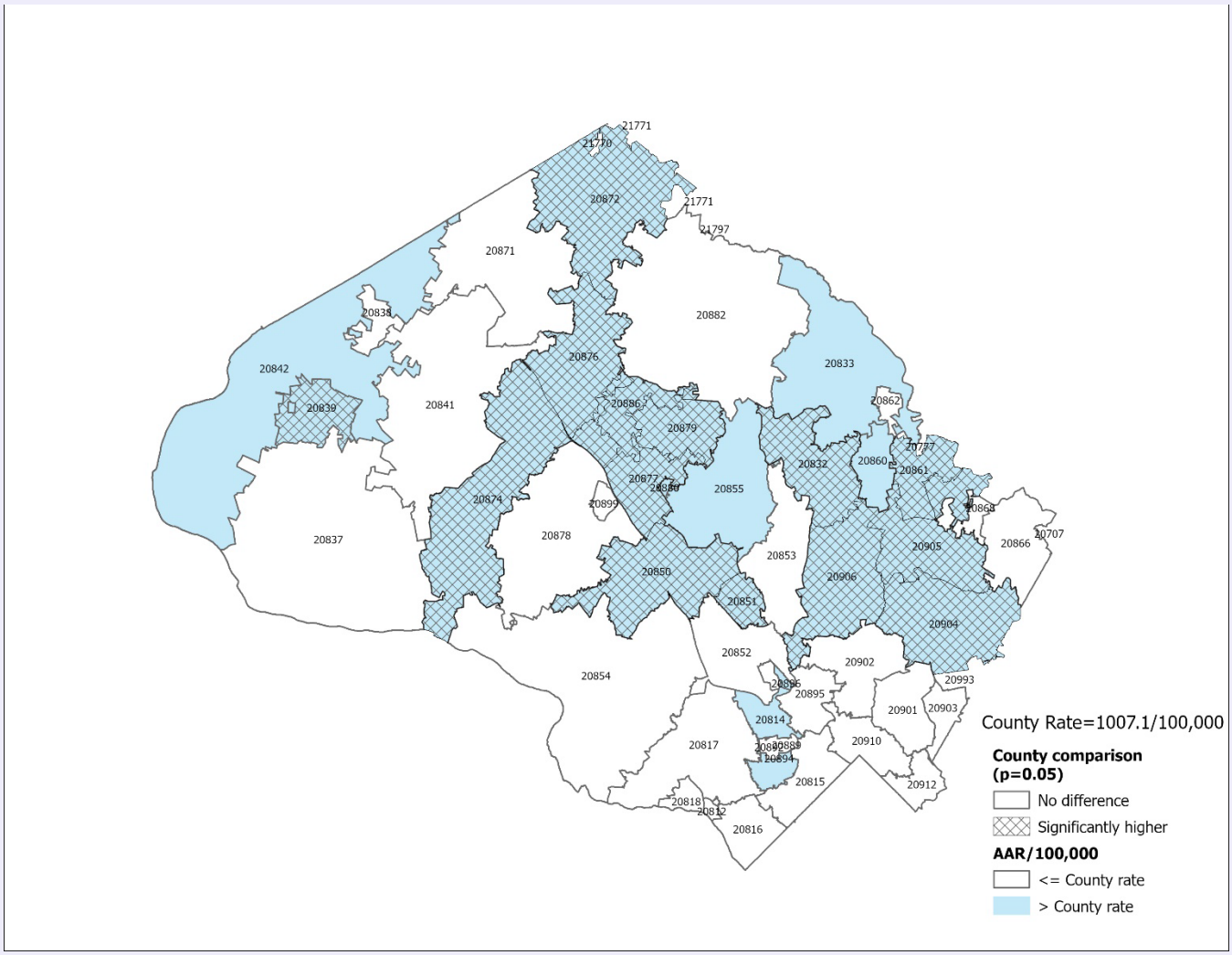


Figure 137. Mental Health Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 23. Mental Health Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



14.3% (95% CI: 12.2-16.5) of adults age 18+ had ever been told they have depressive disorder in Montgomery County, as compared to 17.2% (95% CI: 16.2-18.1) in Maryland.
2.9% (95% CI: 1.9-4.0) of adults age 18+ had not had good mental health in at least the previous 30 days in Montgomery County, as compared to 5.3% (95% CI: 4.7-5.8) in Maryland

69.5% adults aged 18+ with major depressive episodes receiving treatment in the past 12 months

Map 24. Adults Ever Diagnosed with Depression by Zip Code, Montgomery County, 2022

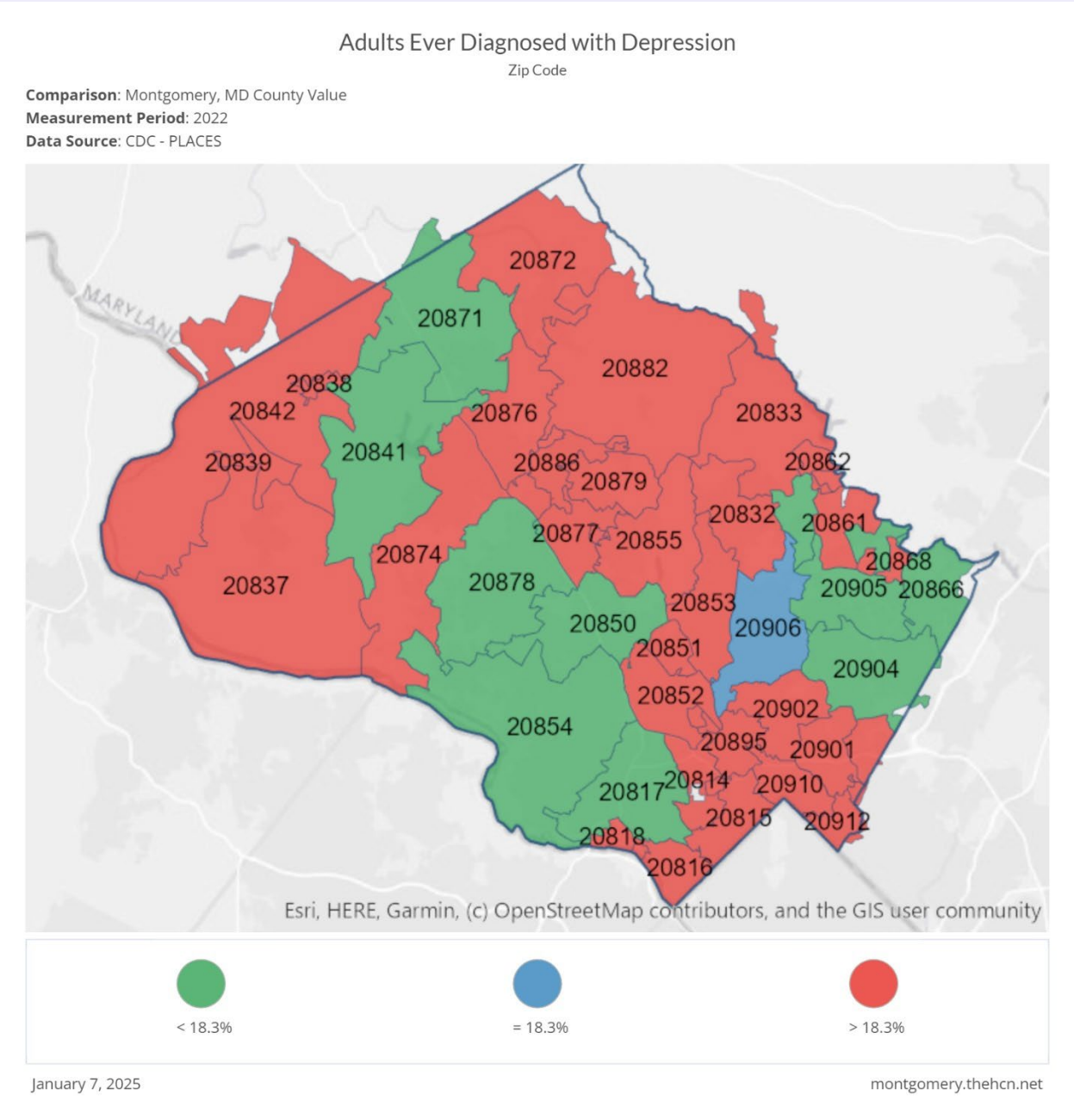


Table 24. Percent High School Students Ever Taken a Prescription Drug without Prescription, Montgomery County, Maryland, and U.S., 2016-21

	2016		2018		2021	
	%	95% CI	%	95% CI	%	95% CI
MoCo	10.3	(9.0-11.7)	11.4	(9.2-14.0)	11.5	(8.7-15.0)
MD	13.7	(13.2-14.3)	14.6	(13.9-15.3)	14.6	(13.8-15.4)
US	14.0	(12.7-15.4)	14.3	(12.8-15.9)	14.2	(12.6-16.0)

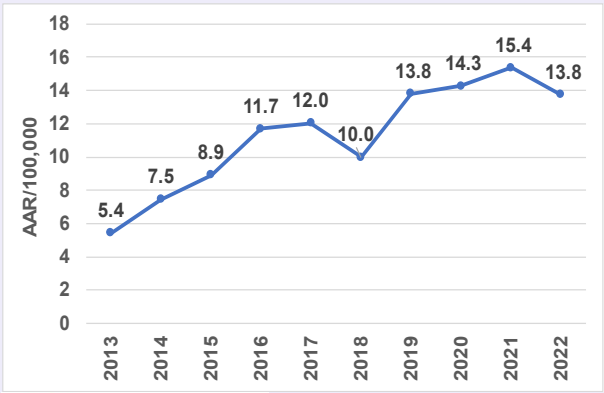
Table 25. Percent High School Students Ever Used Needle to Inject Illegal Drug, Montgomery County, Maryland, and U.S., 2016-21

	2016		2018		2021	
	%	95% CI	%	95% CI	%	95% CI
MoCo	2.4	(1.7-3.4)	2.8	(1.7-4.7)	1.7	(0.8-3.3)
MD	3.8	(3.5-4.1)	4.1	(3.6-4.6)	2.4	(2.1-2.7)
US	1.5	(1.2-1.8)	1.6	(1.2-2.3)	0.8	(0.5-1.3)

* Source: Maryland Youth Risk Behavior Survey (YRBS)
https://phpa.health.maryland.gov/ccdpc/Reports/Pages/yrbs.aspx

- Drug-induced mortality in the County has increased since 2018 (Figure 138).
- NH-Whites had the highest high drug-induced mortality rates among population subgroups, followed by NH-Blacks, Hispanics and Asians/PI; males had drug-induced mortality rates nearly three times as high compared to females (Figure 139).
- Residents aged 18-34 had the highest drug-induced mortality rate, followed by residents aged 35-64 (Figure 140).

Figure 138. Drug-induced Age-Adjusted Mortality Rates, Montgomery County, 2013-22



15.0/100,000

Figure 139. Drug-induced Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

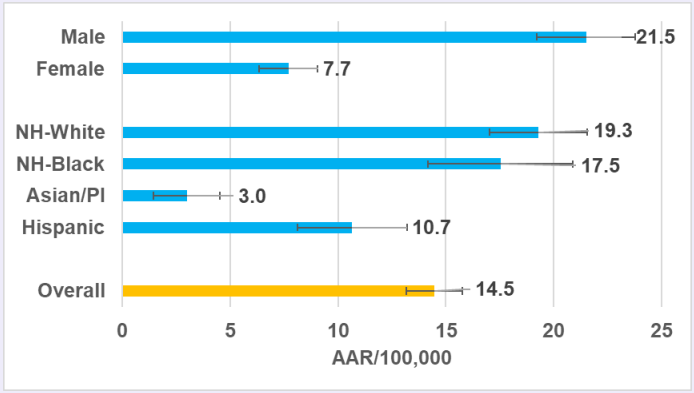
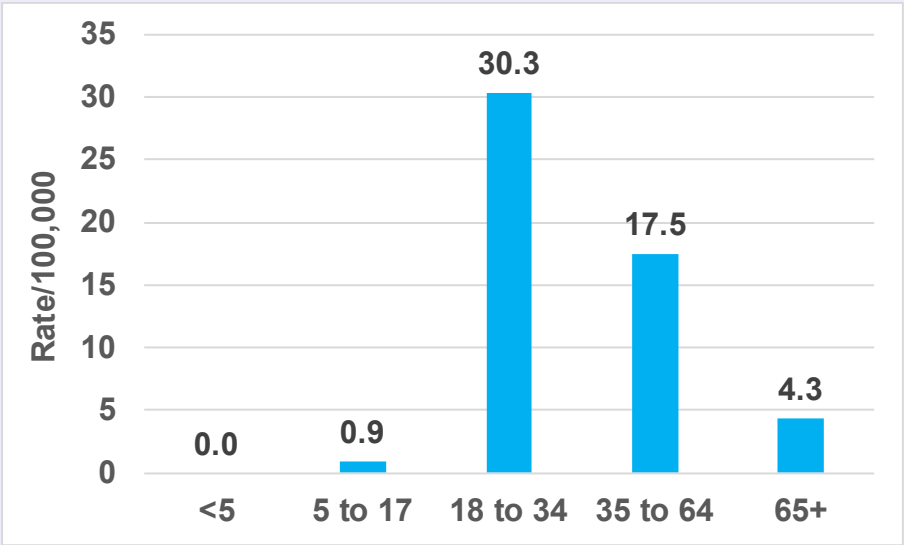
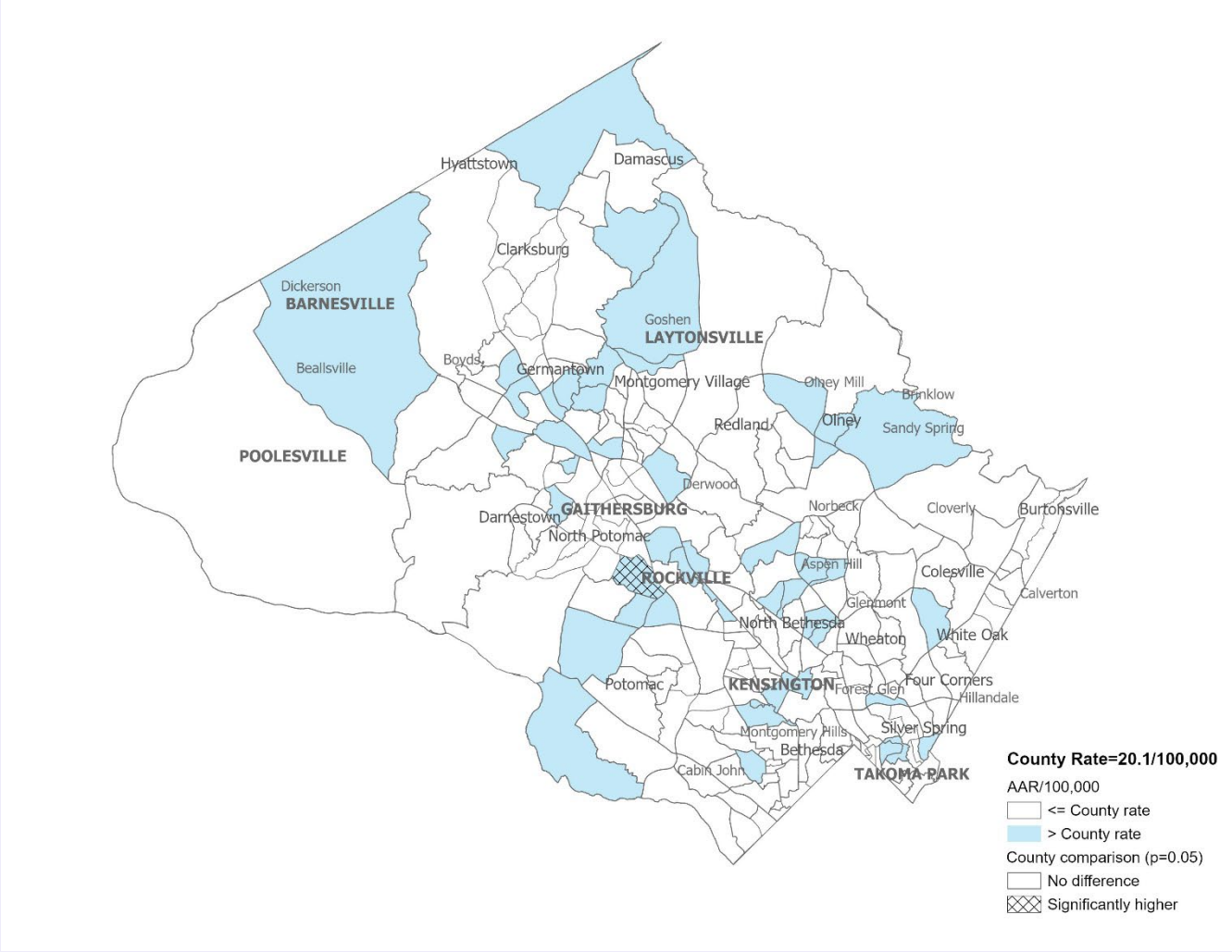


Figure 140. Drug-induced Mortality Rates by Age, Montgomery County, 2020-22

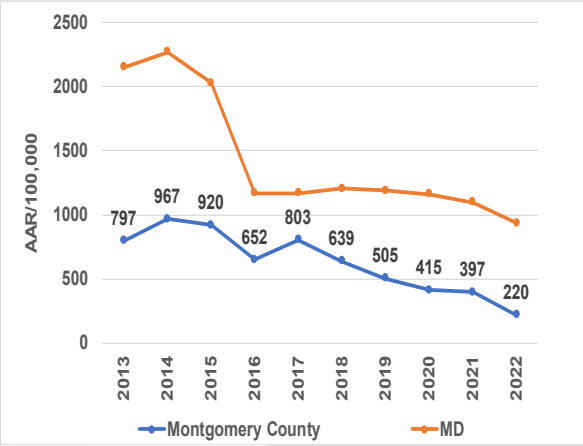


Map 25. Drug-induced Age-Adjusted Mortality Rates by Census Tract, Montgomery County, 2020-22



- Substance use disorder related ER visit had decreased over time; rates in the County were consistently lower than in Maryland (Figure 141).
- Among population subgroups, NH-Blacks had the highest substance use disorder related ER visit rate, followed by NH-Whites, Hispanics, and Asians/PI; males had higher rates than females (Figure 142).
- Residents aged 18-34 had the highest ER visit rate, followed by those aged 35-64 (Figure 143).

Figure 141. Substance Use Disorder Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22



357.8/100,000

Figure 142. Substance Use Disorder Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

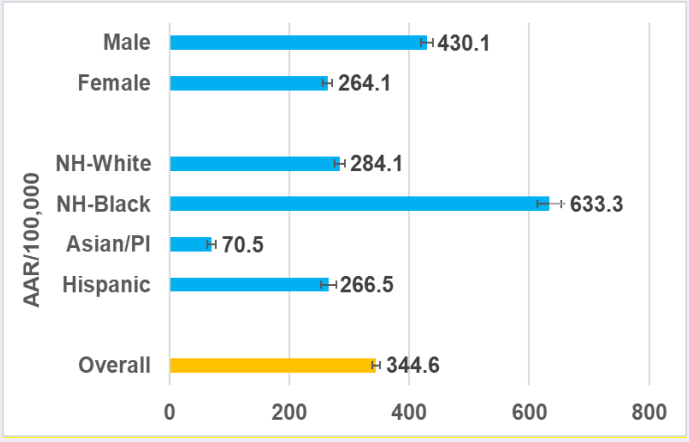
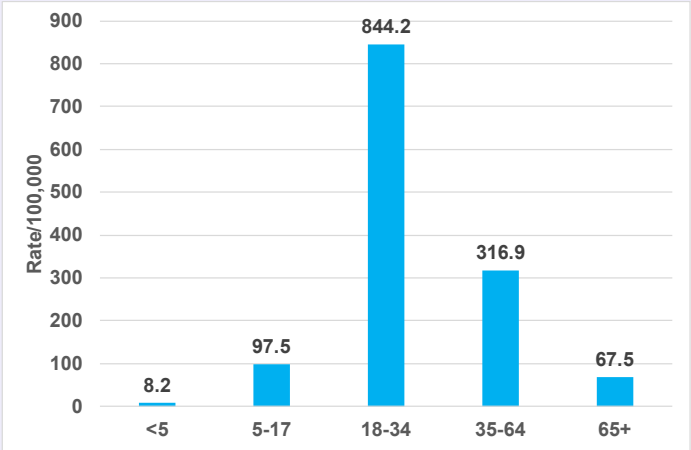
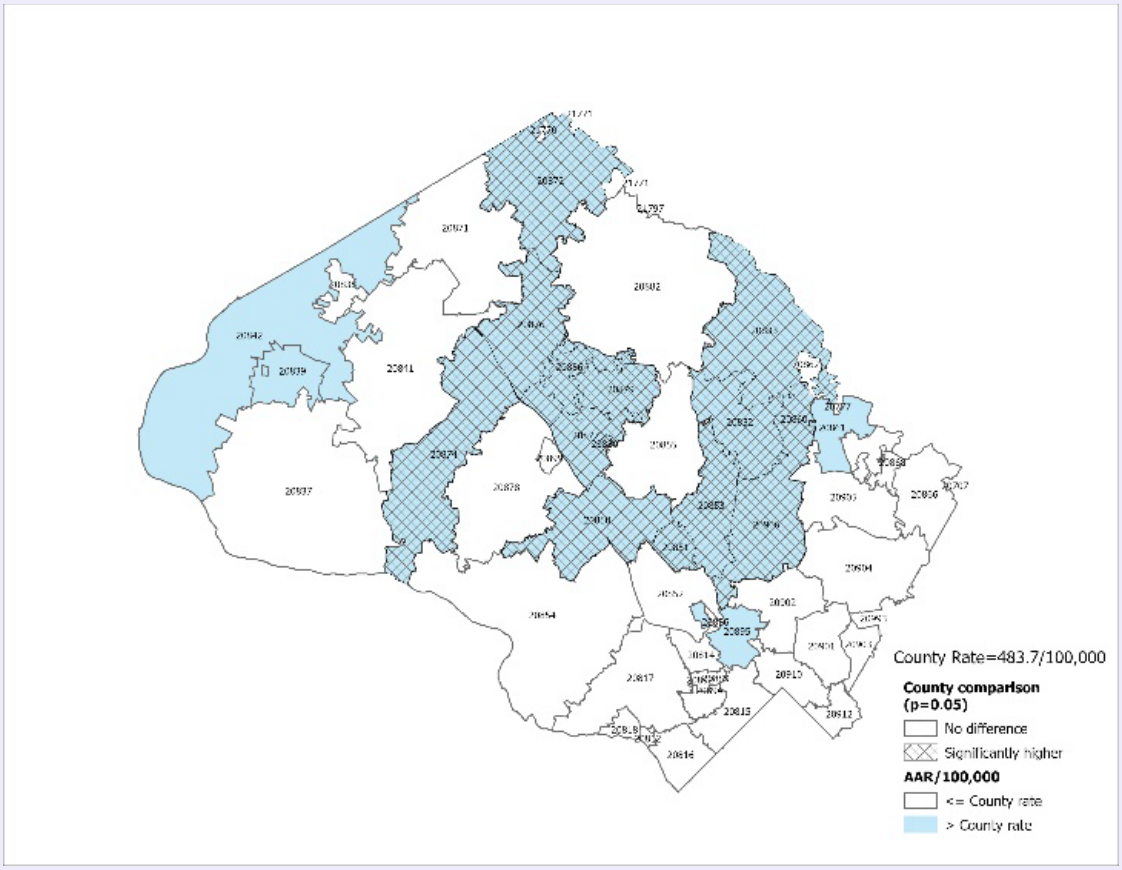


Figure 143. Substance Use Disorder Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 26. Substance Use Disorder Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



3.7% (95% CI: 2.7-4.8) of adults age 18+ had chronic drinking (Men who drink more than 2 alcoholic beverages per day, or women who drink more than 1 alcoholic beverage per day) in Montgomery County, as compared to 5.0% (95% CI: 4.4-5.5) in Maryland

10.1% (95% CI: 8.1-12.3) of adults age 18+ engaged in binge drinking (Men who have 5+ drinks per occasion, or women who have 4+ drinks per occasion) in Montgomery County, as compared to 14.1% (95% CI: 13.1-15.1) in Maryland

Table 26. Drug and Alcohol Related Intoxication Deaths, Montgomery County, 2017-22

	2017	2018	2019	2020	2021	2022
Total Intoxication	116	89	105	139	142	109
Heroin	52	34	39	32	15	6
Opioid (prescription)	19	16	15	16	20	8
Fentanyl	72	40	76	102	112	78
Cocaine	17	18	29	26	36	33
Benzodiazepine	8	9	10	8	12	6
Alcohol	35	19	19	43	37	26

* Source: Overdose Death Report, Maryland Department of Health
https://health.maryland.gov/vsa/Documents/Overdose/2022_AnnualIntoxDeathReport.pdf

Suicide

Table 27. Percent High School Students Report Seriously Considering Suicide Past Year, Montgomery County, Maryland, and U.S., 2018-2022

	2018-2019		2021-2022	
	%	95% CI	%	95% CI
MoCo	16.7	(14.3-19.3)	18.2	(16.1-20.3)
MD	18*	(17.3-18.7)	20.6	(19.9-21.3)
US	18.8*	(17.6-20.0)	20.4	(18.7-22.3)

* Source: Maryland Youth Risk Behavior Survey (YRBS)
https://phpa.health.maryland.gov/ccdpc/Reports/Pages/yrbs.aspx
* 2019 Data Source:
https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBSDataSummaryTrendsReport2019-508.pdf

Table 28. Percent High School Students Report Seriously Considered Attempting Suicide Past Year, Montgomery County and Maryland, 2022

	2022			
	MoCo		Maryland	
	%	95% CI	%	95% CI
Heterosexual	8.6	(5.5-11.6)	11.4	(10.7-12.1)
Gay, Lesbian, or Bisexual	32.9	(26.2-39.5)	39.8	(37.8-41.9)
Other/Questioning	29.3	(21.1-37.6)	35.1	(32.7-37.7)

Source: Maryland YRBS website: https://health.maryland.gov/phpa/ccdpc/Reports/Pages/YRBS-2022-2023.aspx

- Suicide mortality rates in the County fluctuated; rates in the County were consistently lower than that in Maryland and the U.S. (Figure 144).
- NH-Whites had the highest suicide mortality rate among population sub-groups, followed by NH-Blacks and Asian/PI; males had suicide mortality rates more than three times as high compared to females (Figure 145).
- Residents aged 18-34 and 65+ had similar, higher suicide mortality rates (Figure 146).

Figure 144. Suicide Related Age-Adjusted Mortality Rates, Montgomery County, 2013-22

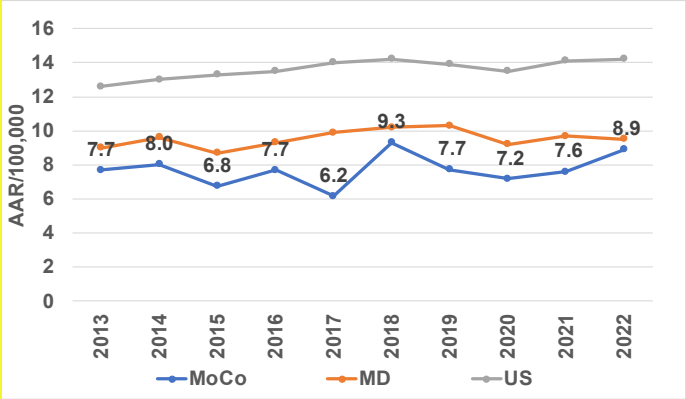
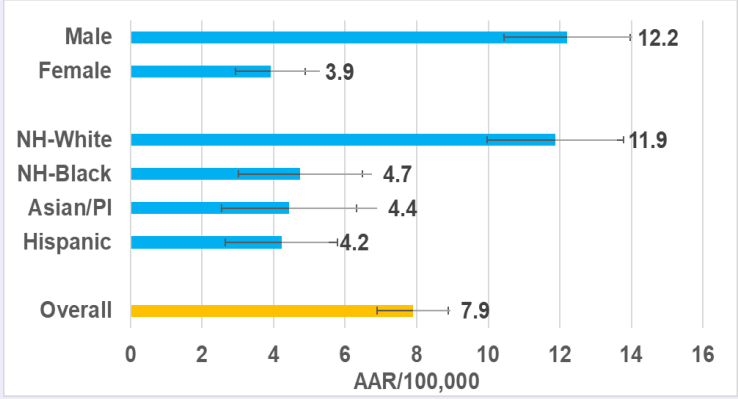


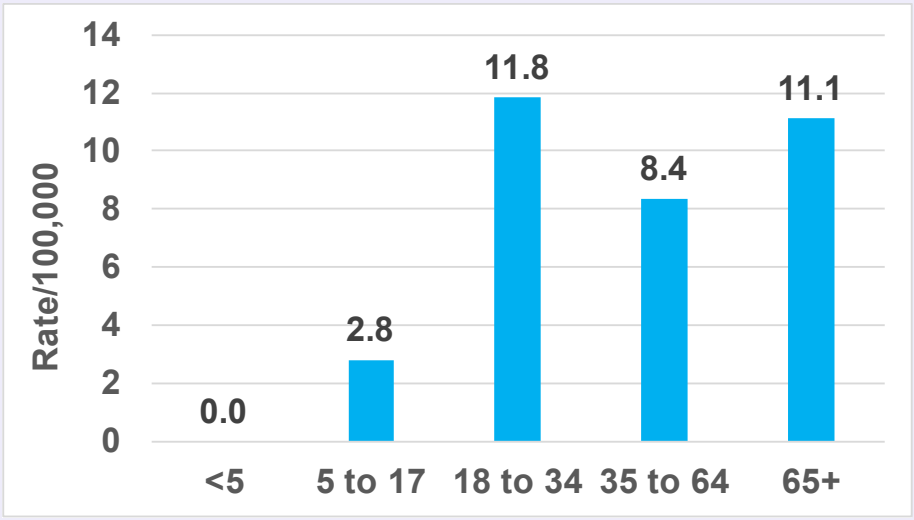
Figure 145. Suicide Related Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



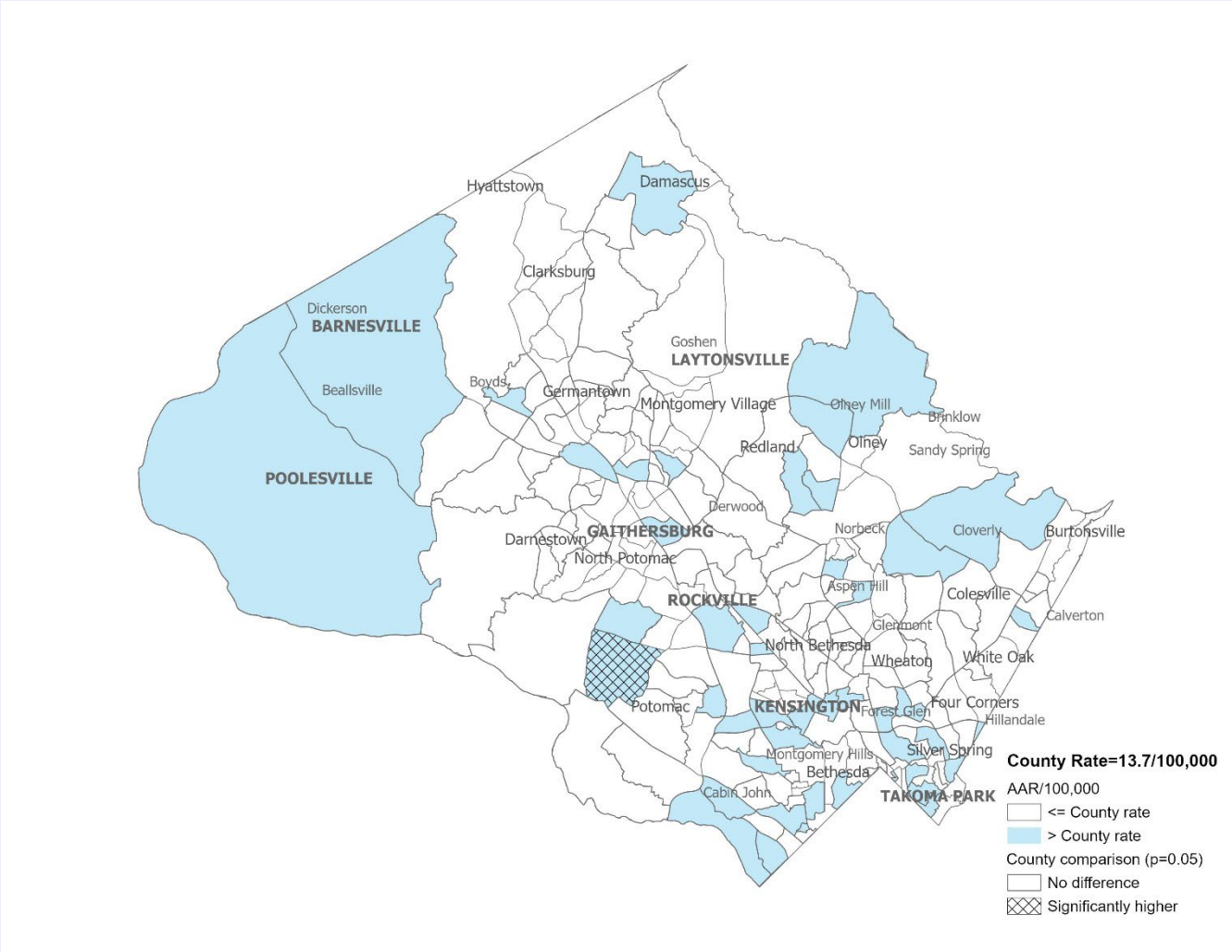
healthy montgomery 2030

12.8/100,000

Figure 146. Suicide Related Mortality Rates by Age, Montgomery County, 2020-22



Map 27. Suicide Related Age-Adjusted Mortality Rates by Census Tract, Montgomery County, 2020-22



- Suicide related hospitalization rates decreased over time; rates in the County were consistently lower than in Maryland (Figure 147).
- Among population subgroups, NH-Blacks had the highest rate, followed by NH-Whites and Hispanics; males and females had similar rates (Figure 148).
- Residents aged 18-34 had the highest rate, followed by aged 65+ (Figure 149).

Figure 147. Suicide Related Hospitalization Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

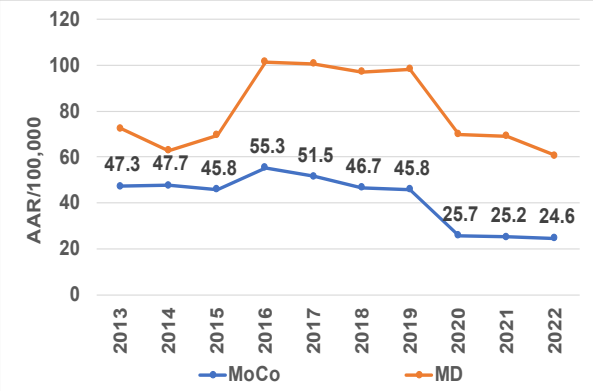


Figure 148. Suicide Related Hospitalization Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

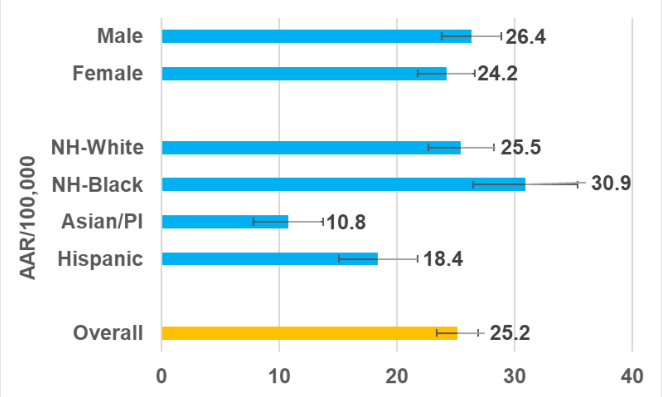
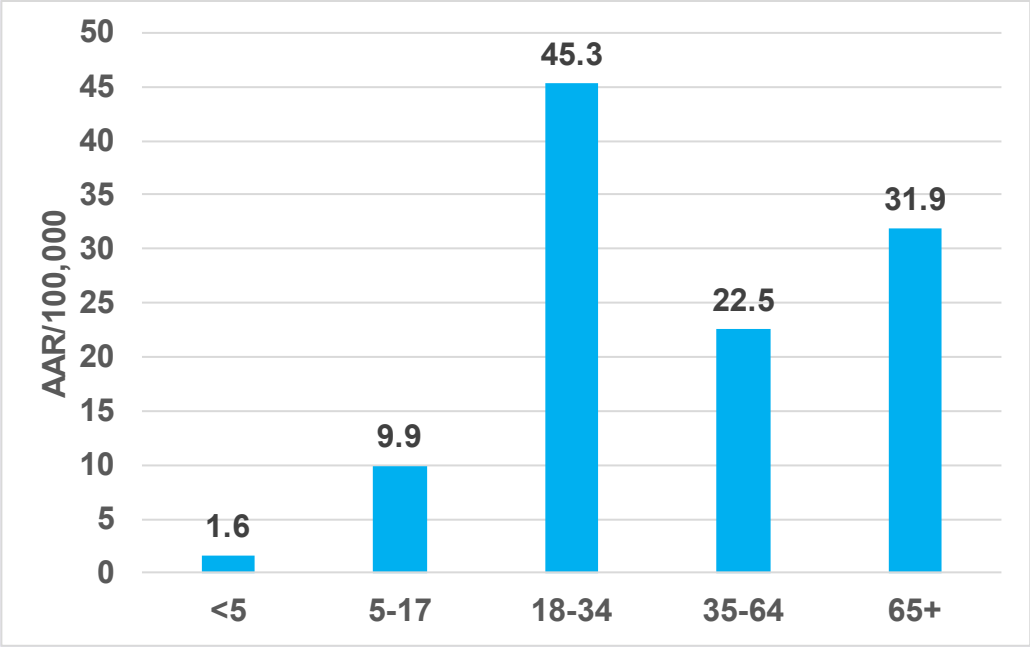
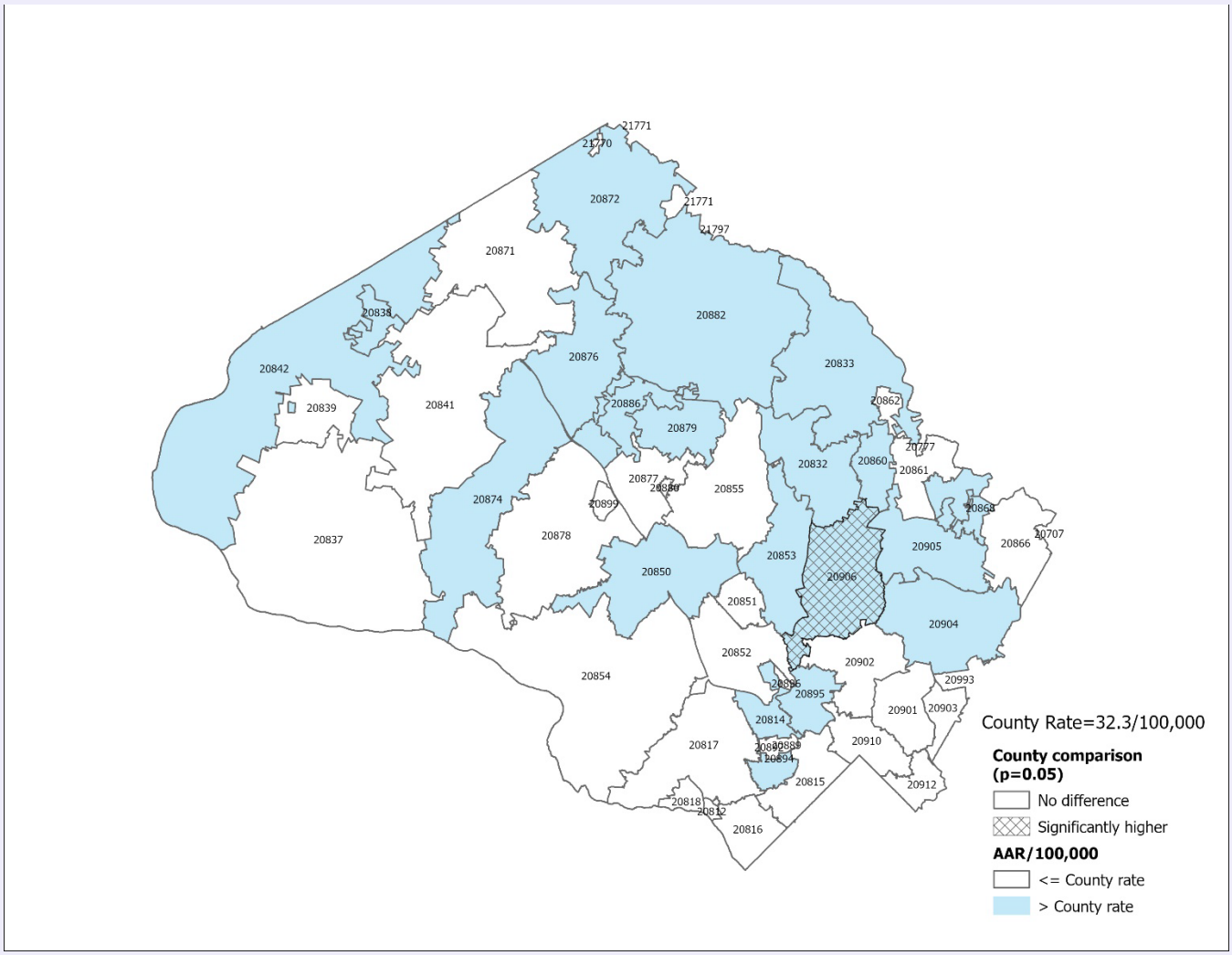


Figure 149. Suicide Related Hospitalization Rates by Age, Montgomery County, 2020-22



Map 28. Suicide Related Hospitalization Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



- Suicide related ER visit rates increased over time, though fluctuated, similar to those in Maryland; rates in the County were consistently lower than in Maryland (Figure 150). Rates before 2016 may not be comparable due to the transitions of ICD-9 to ICD-10.
- Among population subgroups, NH-Blacks had the highest suicide related ER visit rates, followed by NH-Whites, and Hispanics; Asian/PI had the lowest rate; females had higher rates than males (Figure 151).
- Residents aged 18-34 had the highest rates, followed by those aged 5-17 and 35-64 (Figure 152).

Figure 150. Suicide Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

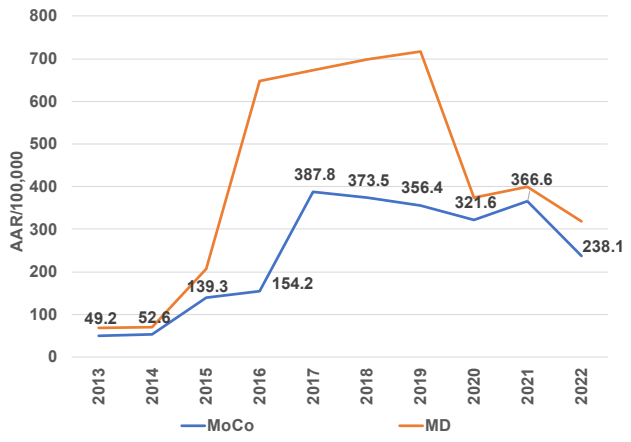


Figure 151. Suicide Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

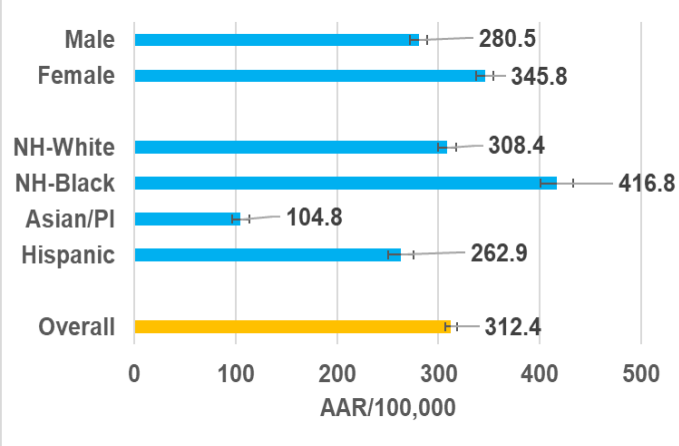
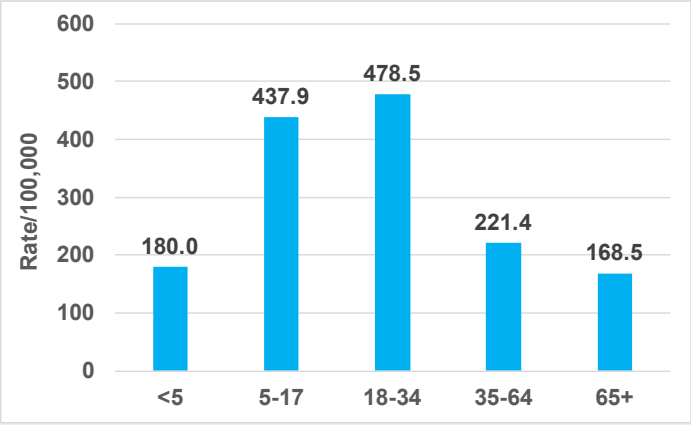
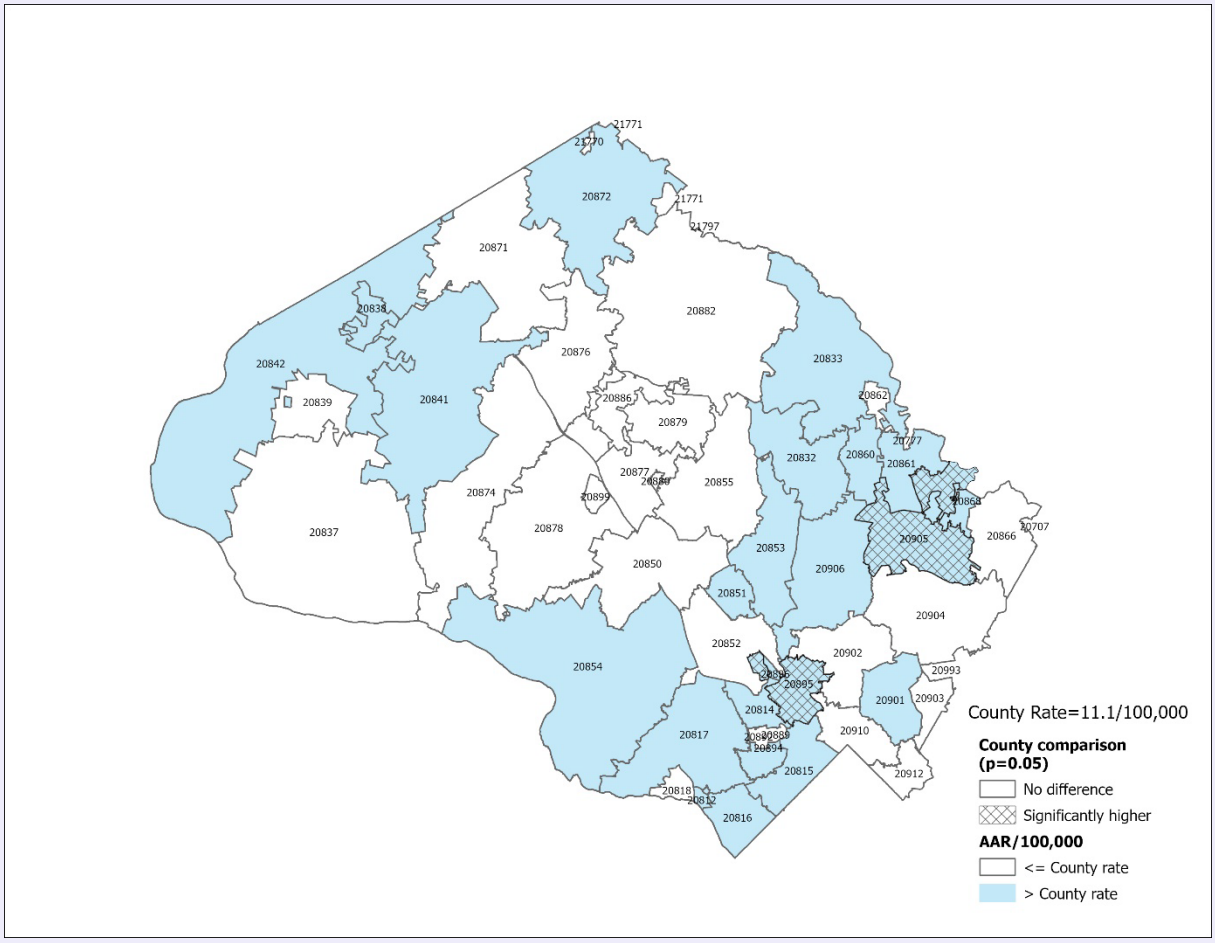


Figure 152. Suicide Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 29. Suicide Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



1.8 suicide attempts per 100 population

Injuries

Injury is damage or harm to the body resulting in impairment or destruction of health. Injury includes trauma from motor vehicle crashes, crushing and piercing by machines, falls, poisoning, burns, suffocation, and drowning. It also includes intentional acts like homicide, suicide, and assault. Injuries remain one of the most important causes of preventable morbidity and mortality in Maryland and the U.S.

3 of the top 5 causes of death for those aged 5-29 are injury-related: road traffic injuries homicide, and suicide. Tens of millions of people experience non-fatal injuries each year worldwide that end up in emergency room visits and hospitalizations and they often results in temporary or permanent disabilities which requires long-term physical and mental health care [36].

In 2013, the burden and costs of injuries alone accounted for more than $1.13 billion in hospital and emergency department charges in Maryland. The burden of injury in Maryland amounted to 94,145 years of potential life lost (YPLL) in 2013. Forty-One percent of this was due to unintentional injuries, 19.6% due to homicides, and 17.8% due to suicides [37].

Table 29. Injury Related Mortality by Sex and Race/Ethnicity, Montgomery County, 2020-22

	Total	Sex		Race/Ethnicity			
		Male	Female	NH-White	NH-Black	Asian/PI	Hispanic
All Injuries	2,221	1,390	831	1,404	452	213	312
Motor Vehicle	189	139	50	67	30	20	66
Firearm	169	144	25	73	61	7	23
Fall	377	188	189	278	27	47	20

Overall Injury

- There was an increasing trend for overall injury in Montgomery County; the mortality rates had a sharp increase from 2021 to 2022 in the County (Figure 153).
- Among population subgroups, NH-White had the highest injury related mortality rate, followed by NH-Blacks, Hispanics, and Asian/PI; males had rates more than twice as high compared to females (Figure 154).
- Residents ages 65 and older had the highest rates, followed by those aged 18-34, and 35-64 (Figure 155).

Figure 153. Overall Injury Related Age-Adjusted Mortality Rates, Montgomery County, 2013-22

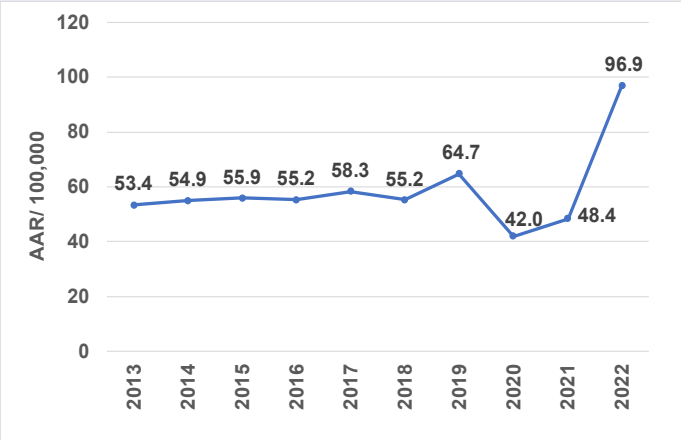


Figure 154. Overall Injury Related Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

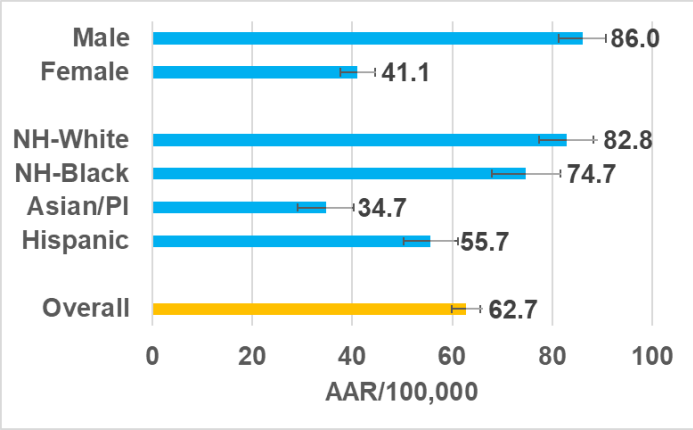
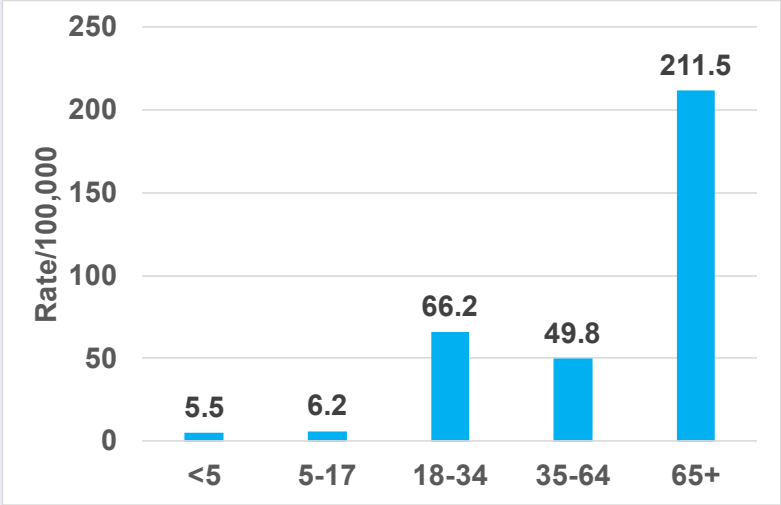


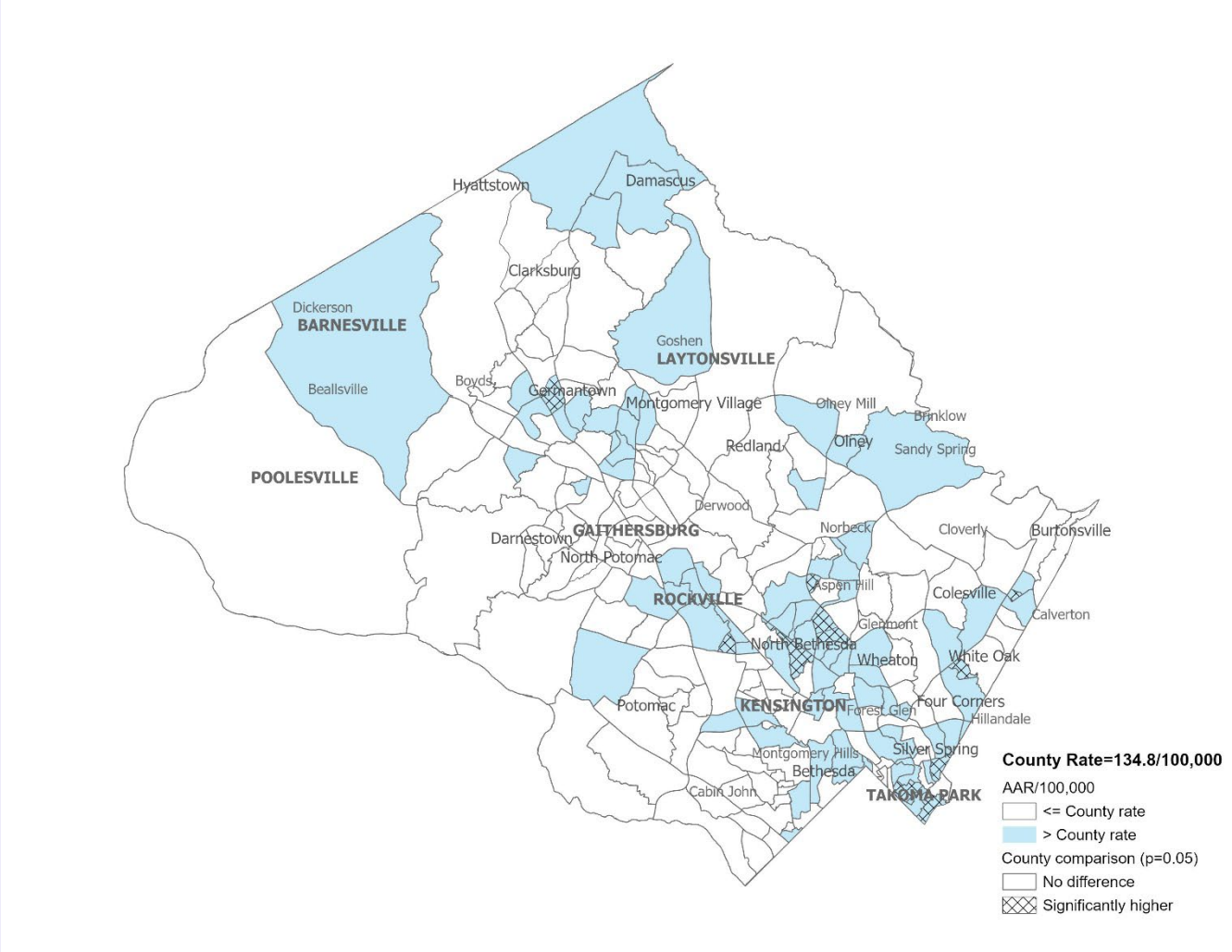
Figure 155. Overall Injury Related Mortality Rates by Age, Montgomery County, 2020-22



Healthy People 2030

63.1 deaths per 100,000 population caused by injuries

Map 30. Overall Injury Related Age-Adjusted Mortality Rates by Census Tract, Montgomery County, 2020-22



- Overall injury hospitalization rates decreased in the County, consistent with those in Maryland; the rates in the County were consistently lower than in Maryland (Figure 156).
- Among population subgroups, NH-Blacks had the highest rates, followed by NH-Whites, Hispanics, and Asians/PI; males had higher rates than females (Figure 157).
- Residents aged 65 years and older had the highest rates (Figure 158).

Figure 156. Overall Injury Related Hospitalization Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

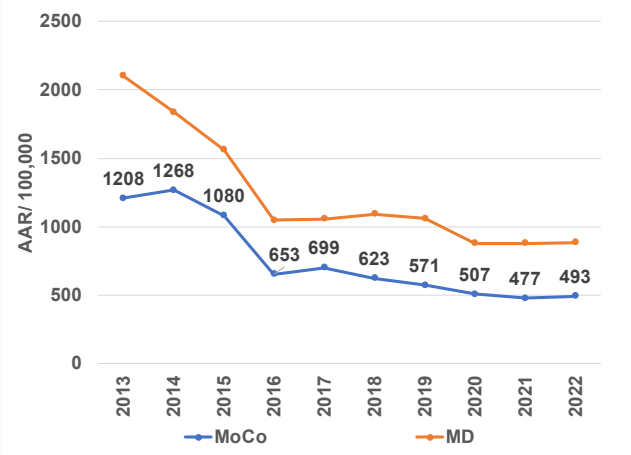


Figure 157. Overall Injury Related Hospitalization Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

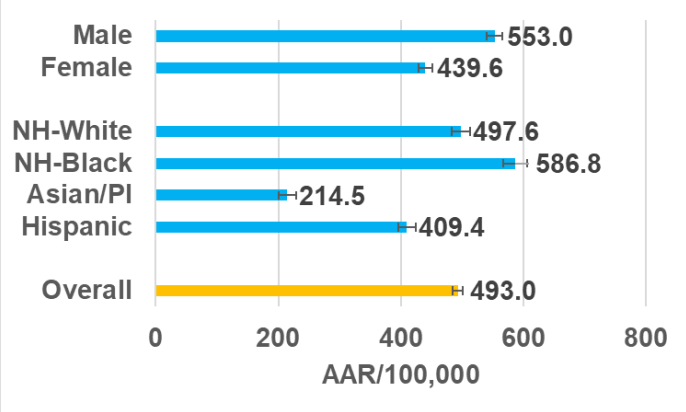
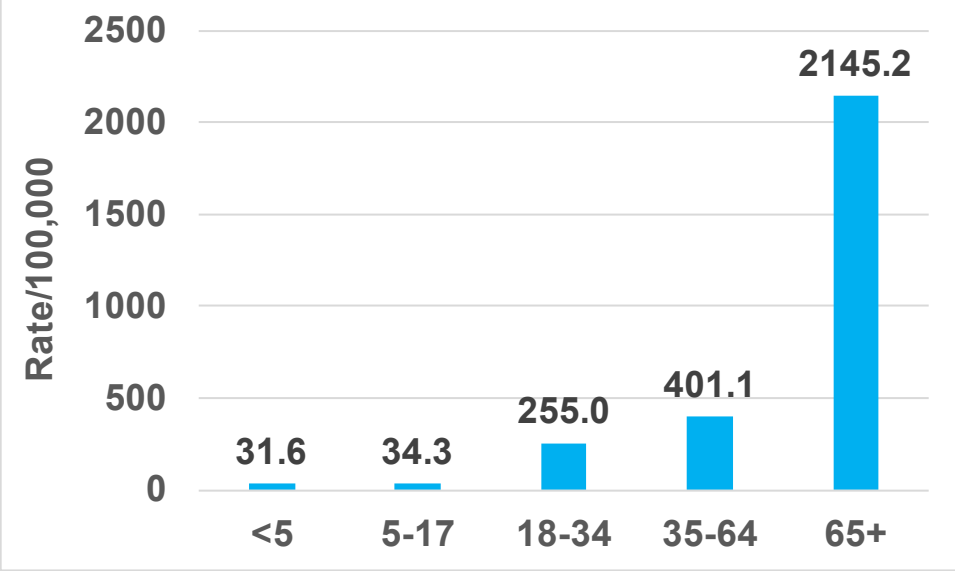
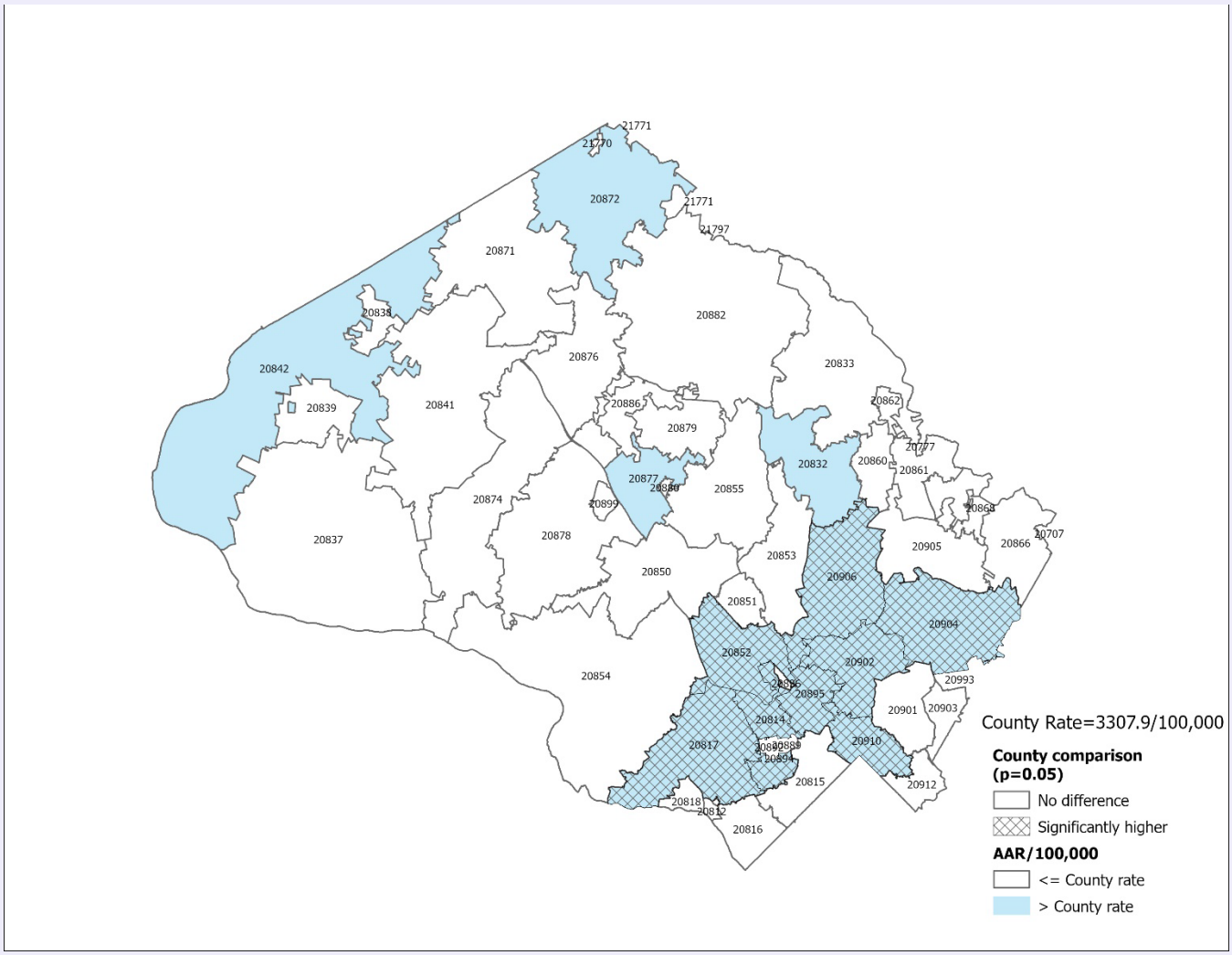


Figure 158. Overall Injury Related Hospitalization Rates by Age, Montgomery County, 2020-22



Map 31. Overall Injury Related Hospitalization Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



- Overall injury ER visit rates decreased, consistent with those in Maryland; the rates in the County were consistently lower than in Maryland (Figure 159).
- Among population subgroups, NH-Blacks had the highest overall injury ER visit rates, followed by Hispanics; Males had higher rates than females (Figure 160).
- Residents aged 65+ had the highest rates followed closely by residents aged 18-34 (Figure 161).

Figure 159. Overall Injury Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

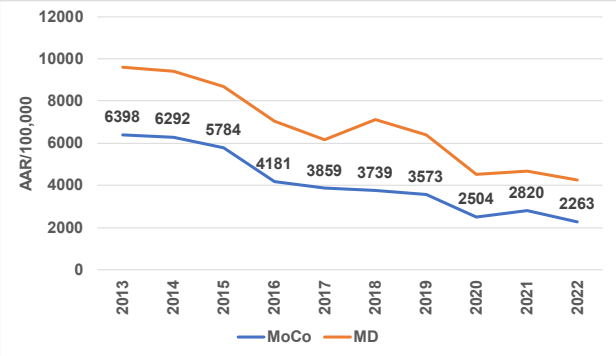


Figure 160. Overall Injury Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

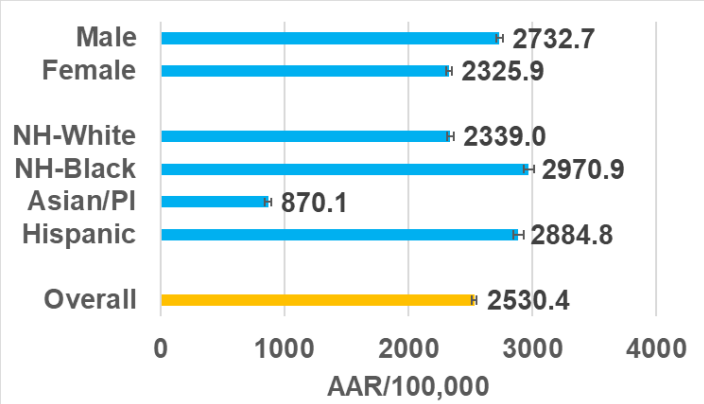
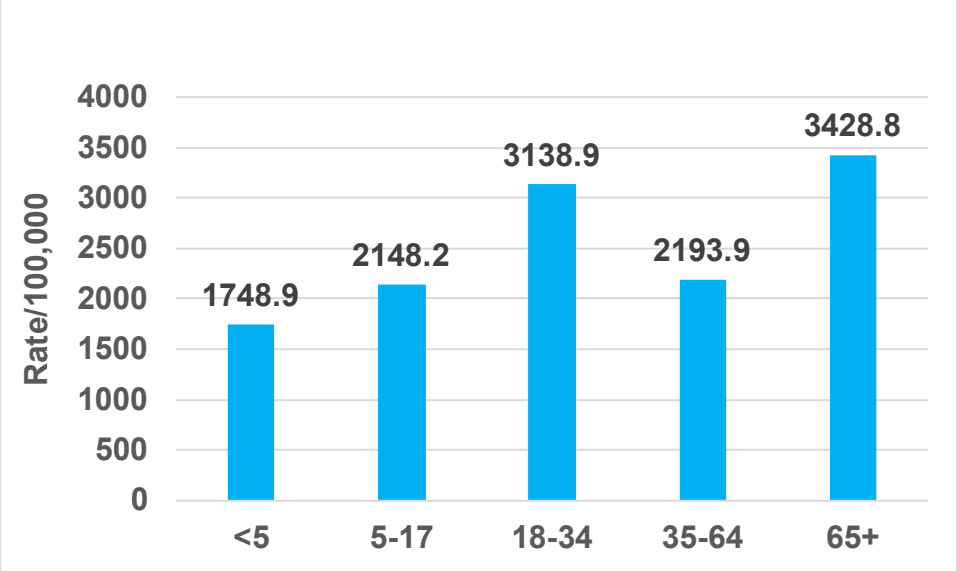
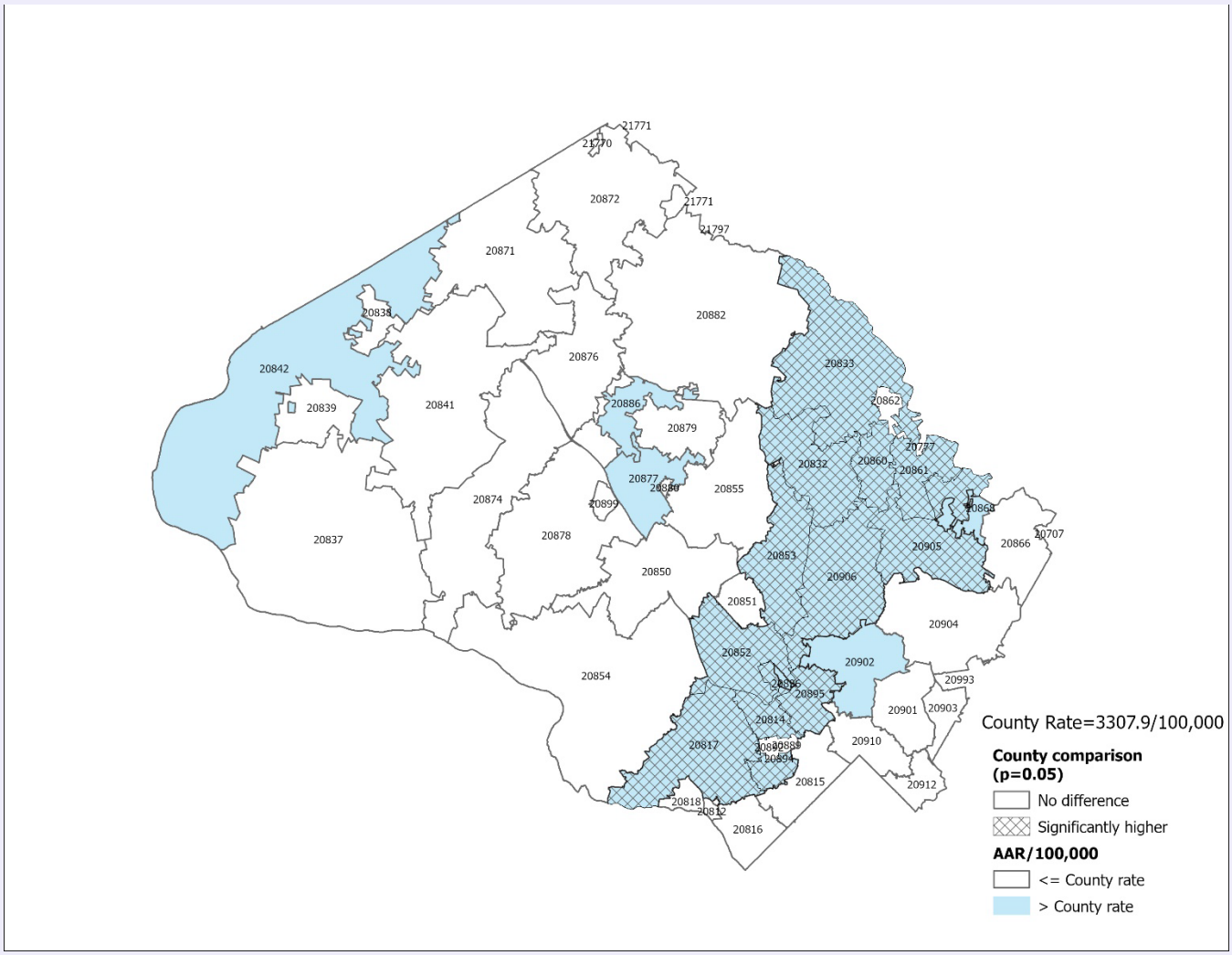


Figure 161. Overall Injury Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 32. Overall Injury Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



Healthy People 2030

7738.2 ED visits per 100,000 population for nonfatal injuries

Motor Vehicles

- Motor vehicle mortality rates increased in the County between 2020 and 2022 (Figure 162).
- Hispanics had the highest mortality rates among all population subgroups; males had mortality rates three times as high compared females (Figure 163).
- Residents aged 18 to 34 had the highest rates, followed those aged 65 years and older (Figure 164).

Figure 162. Motor Vehicle Related Age-Adjusted Mortality Rates, Montgomery County, 2013-22

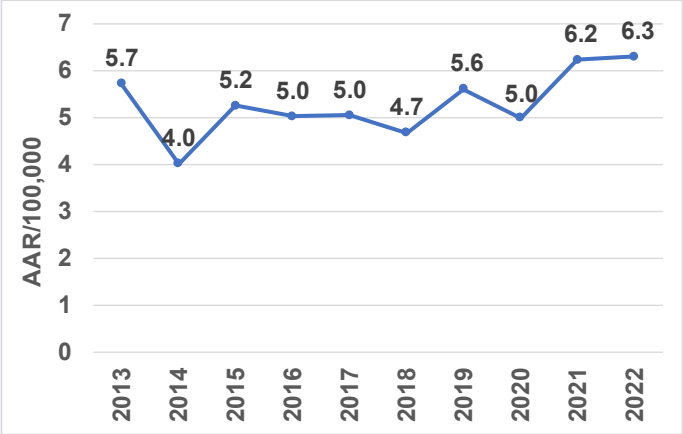


Figure 163. Motor Vehicle Related Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

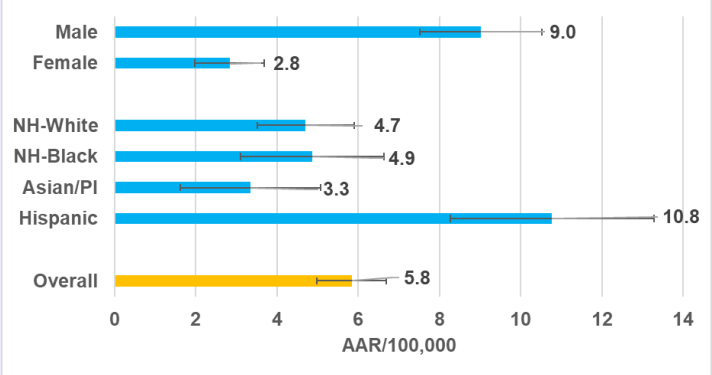
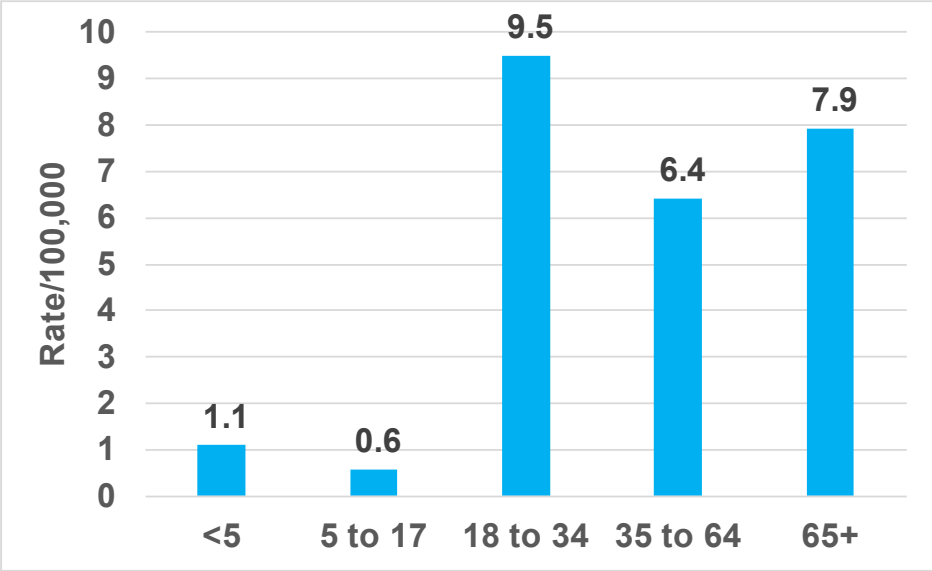


Figure 164. Motor Vehicle Related Mortality Rates by Age, Montgomery County, 2020-22



- Overall motor vehicle related hospitalization rates decreased in the County, consistent with those in Maryland; the rates in the County were consistently lower than Maryland (Figure 165).
- Among population subgroups, Hispanics and NH Blacks had the highest motor vehicle related hospitalization rates, followed by NH-Whites; Males had rates twice as high compared to females (Figure 166).
- Residents 65+ had the highest rates, followed by aged 18-34, and those aged 35-64 (Figure 167).

Figure 165. Motor Vehicle Related Hospitalization Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

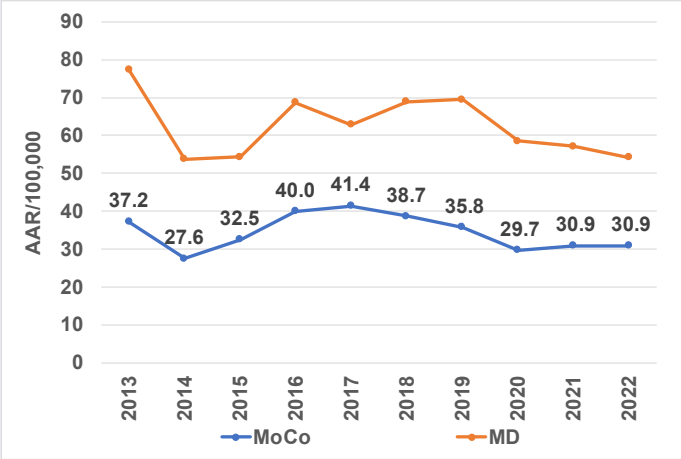


Figure 166. Motor Vehicle Related Hospitalization Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

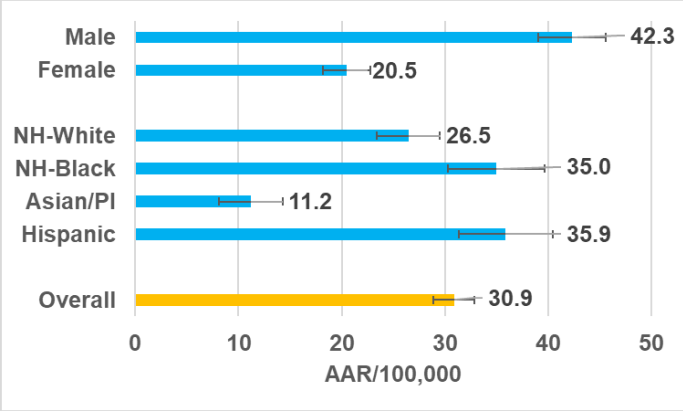
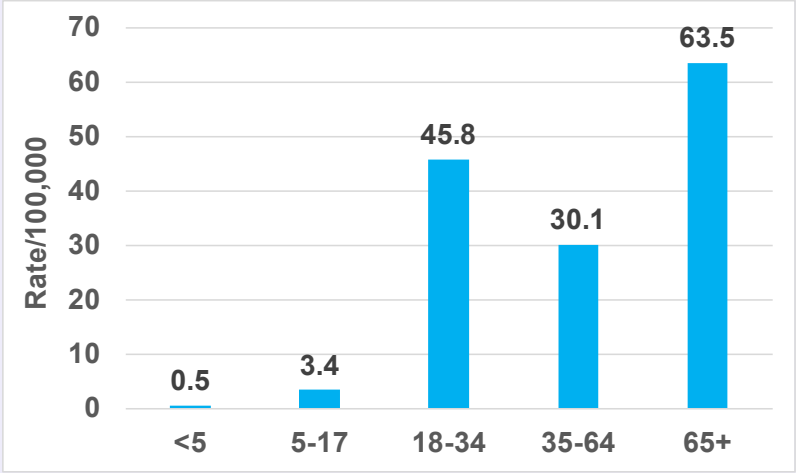
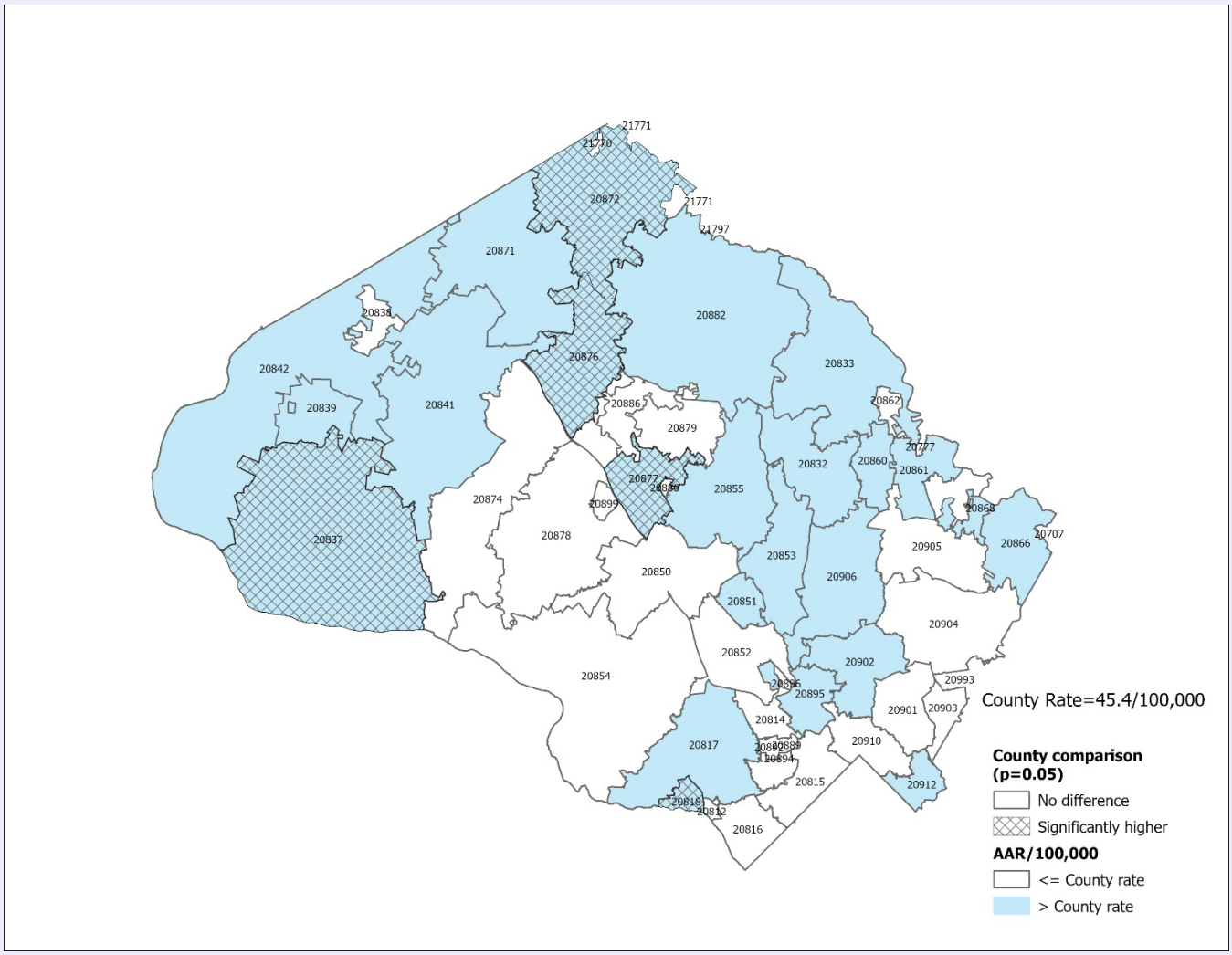


Figure 167. Motor Vehicle Related Hospitalization Rates by Age, Montgomery County, 2020-22

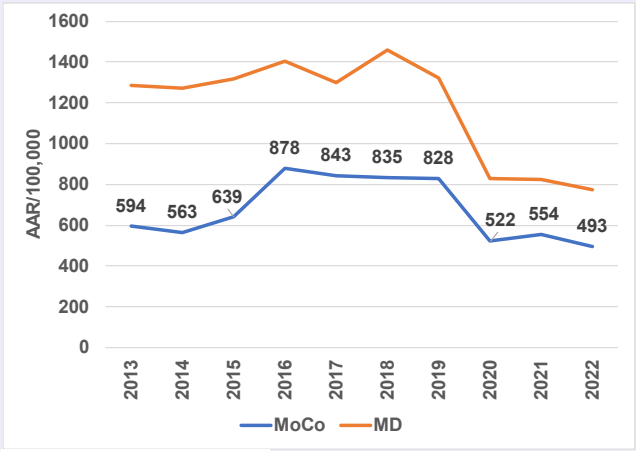


Map 33. Motor Vehicle Related Hospitalization Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



- Overall motor vehicle related ER visit rates fluctuated similar to the trend in Maryland; the rates in the County were consistently lower than Maryland (Figure 168).
- Among population subgroups, NH-Blacks had the highest motor vehicle related ER visit rates, followed by Hispanics, NH-Whites, and Asian/PI; males had higher rates than females (Figure 169).
- Residents aged 18-34 had the highest rates, followed by aged 35-64 and aged 5-17 (Figure 170).

Figure 168. Motor Vehicle Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22



540.2/100,000

Figure 169. Motor Vehicle Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

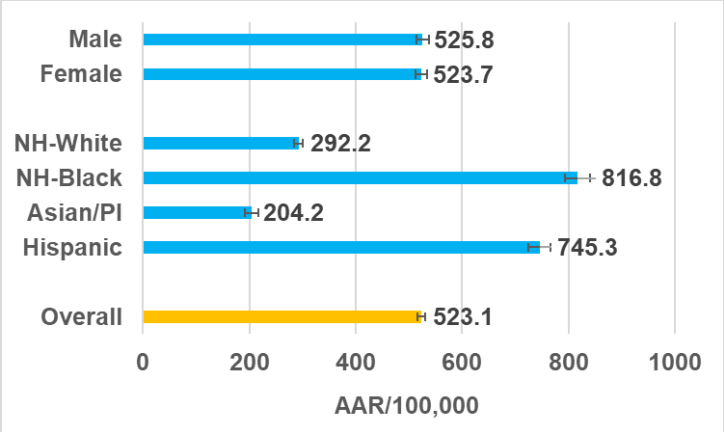
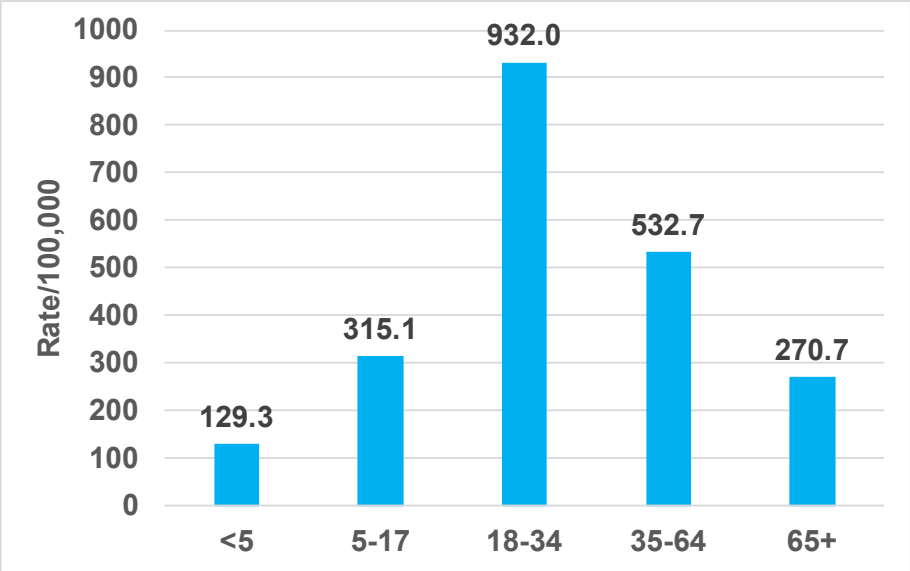
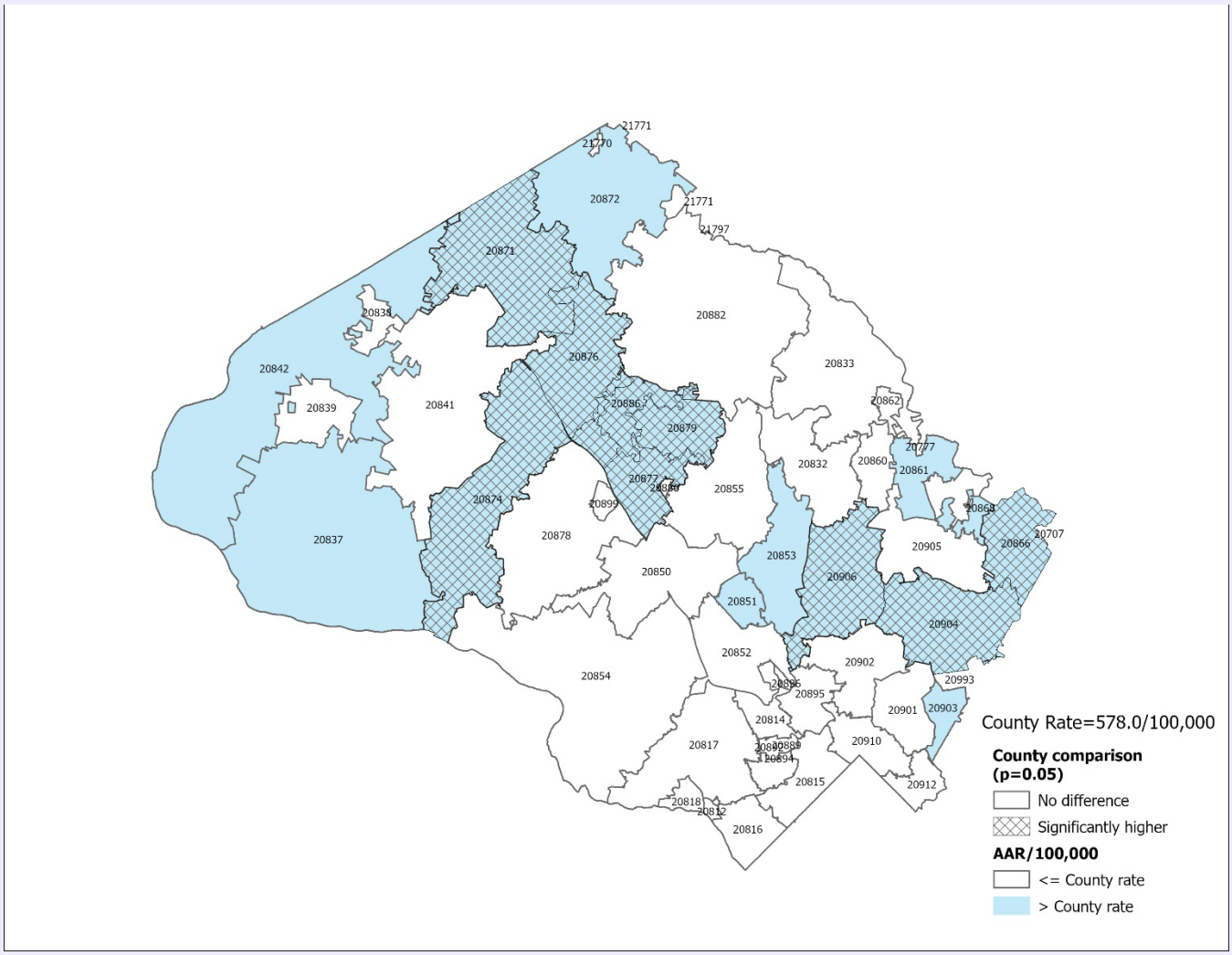


Figure 170. Motor Vehicle Related ER Visit Rates by Age, Montgomery County, 2020-22



Map 34. Motor Vehicle Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



93.8% (95% CI: 90.9-94.6) of adults age 18+ were always compliant with seat belt use in Montgomery County, as compared to 91.8% (95% CI: 90.9-92.6) in Maryland.

10.1 motor vehicle traffic-related deaths per 100,000 population

Firearms

- Firearm mortality rates increased over time in the county (Figure 171).
- NH-Blacks had the highest firearm related mortality rates, followed by NH-Whites, Hispanics, and Asians/PI; males had rates six times as high compared to females (Figure 172).
- Residents aged 18-34 had the highest rates, followed by those aged 35 to 64 (Figure 173).

Figure 171. Firearm Related Age-Adjusted Mortality Rates, Montgomery County, 2013-22

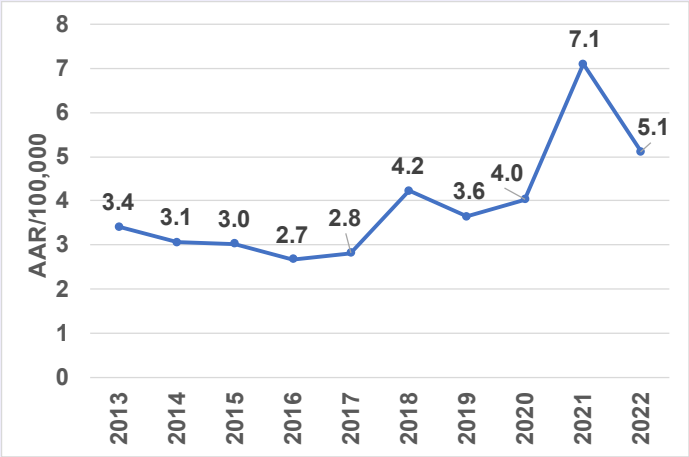


Figure 172. Firearm Related Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

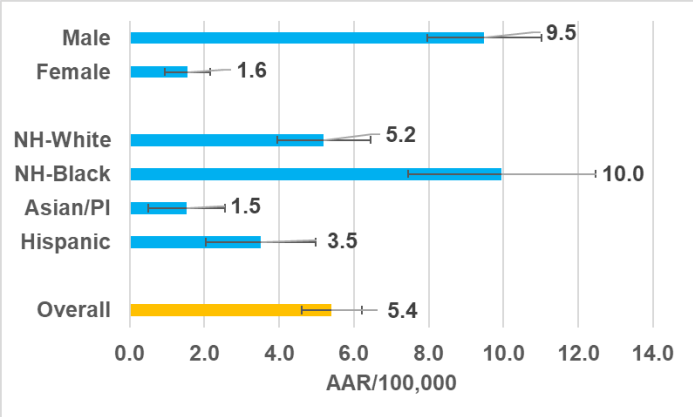
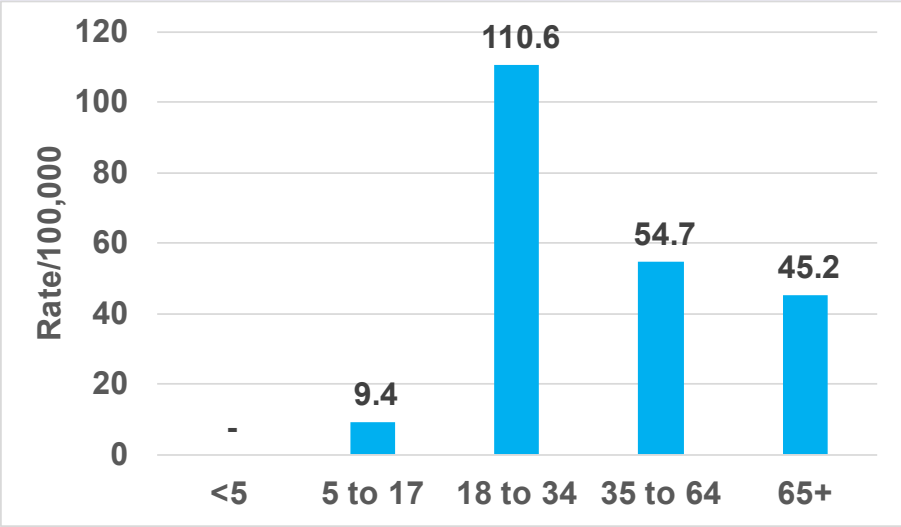


Figure 173. Firearm Related Mortality Rates by Age, Montgomery County, 2020-22



- Overall firearm related hospitalization rates fluctuated over time in the County; the rates in the County were consistently lower than in Maryland (Figure 174).
- Among population subgroups, NH-Blacks had the highest firearm related hospitalization rates, followed by Hispanics, NH-Whites, and Asians/PI; males had rates five times as high compared to females (Figure 175).
- Residents aged 18-34 had the highest rates, followed by those aged 35-64 (Figure 176).

Figure 174. Firearm Related Hospitalization Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

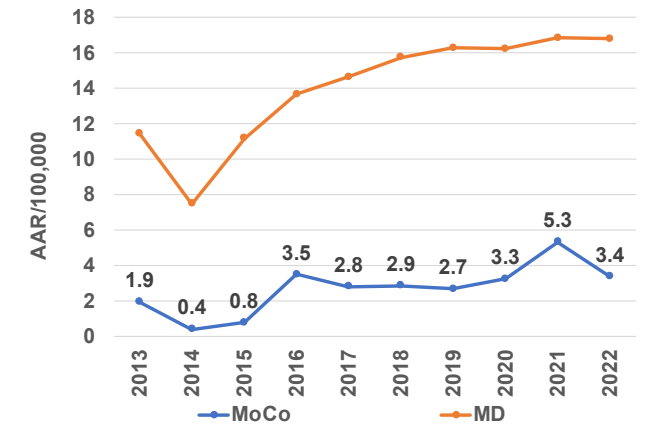
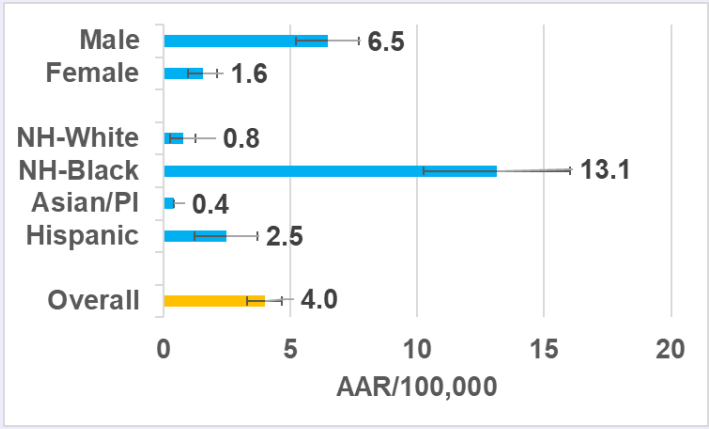
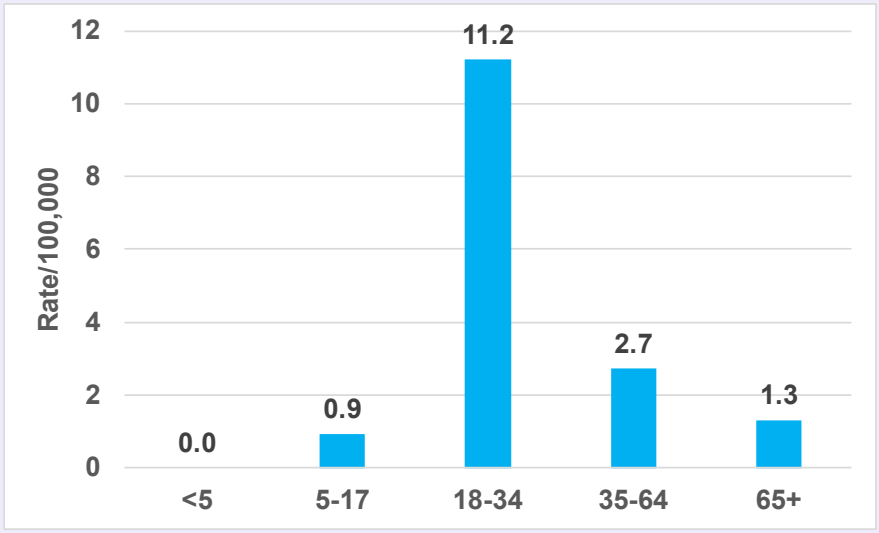


Figure 175. Firearm Related Hospitalization Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



4.5/100,000

Figure 176. Firearm Related Hospitalization Rates by Age, Montgomery County, 2020-22



- Firearm related ER visit rates fluctuated over time in the County. Rates in the County were consistently lower than in those in Maryland (Figure 177).
- Among population subgroups, NH-Blacks had the highest firearm related ER visit rates, followed by Hispanics, NH-Whites, and Asians/PI; males had rates more than six times as high compared to females (Figure 178).
- Residents aged 18-34 had the highest rates, followed by those aged 35-64 and those aged 5-17 (Figure 179).

Figure 177. Firearm Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

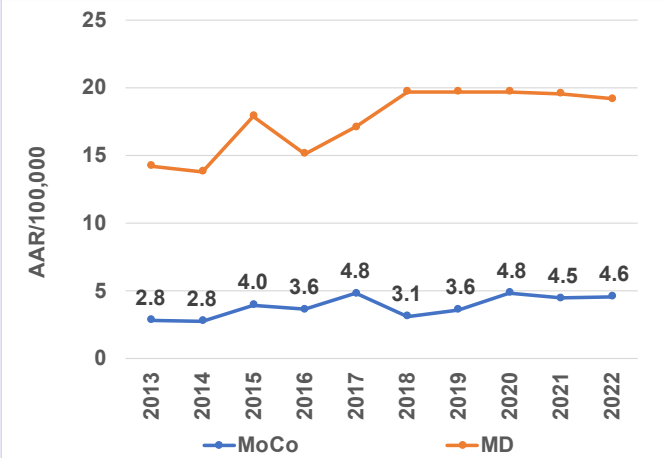


Figure 178. Firearm Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

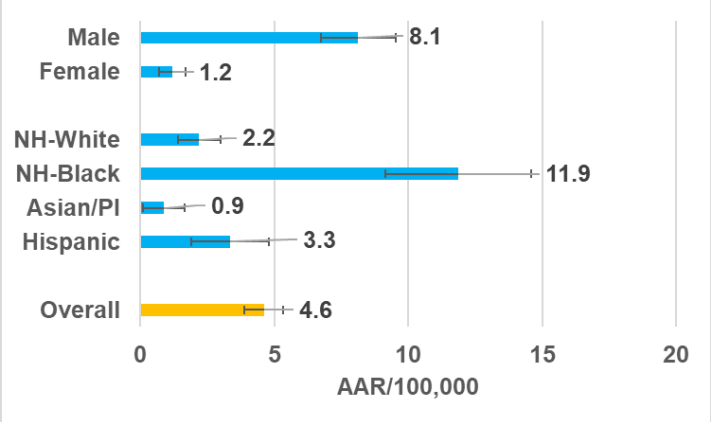
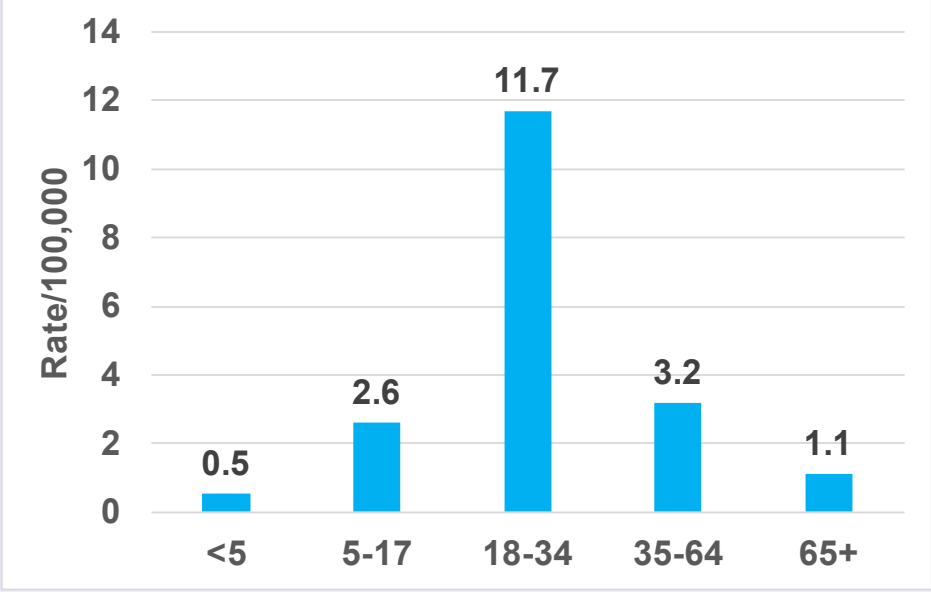


Figure 179. Firearm Related ER Visit Rates by Age, Montgomery County, 2017-19



Healthy People 2030

10.1 injuries per 100,000 population for nonfatal firearm-related injuries

Falls

- Fall mortality rates increased in the County since 2018 (Figure 180).
- NH-Whites had the highest fall mortality rates among population subgroups, followed by Asians/PI and NH Blacks; males had higher rates compared to females (Figure 181).
- Residents aged 65 and older had the highest fall mortality rates compared to all other age groups (Figure 182).

Figure 180. Fall Related Age-Adjusted Mortality Rates, Montgomery County, 2013-22

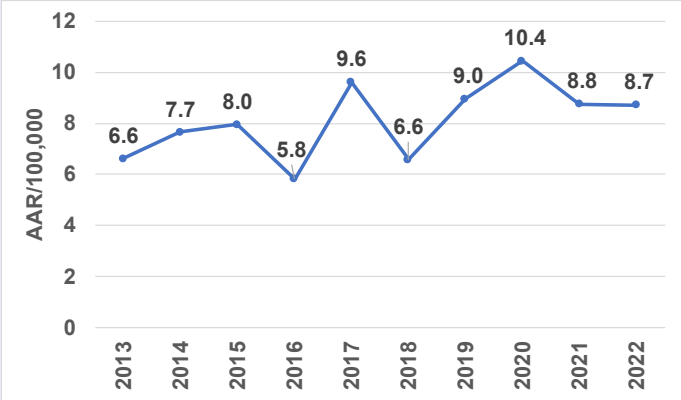
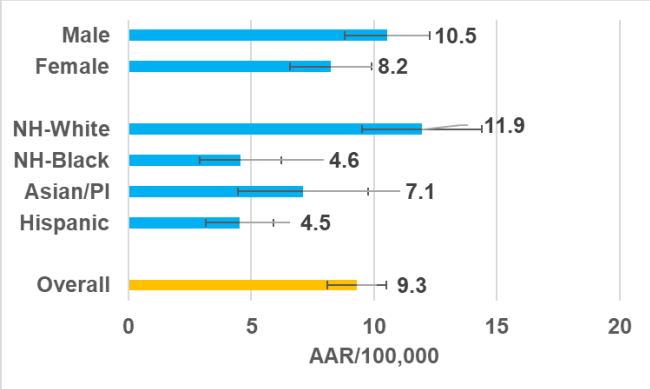


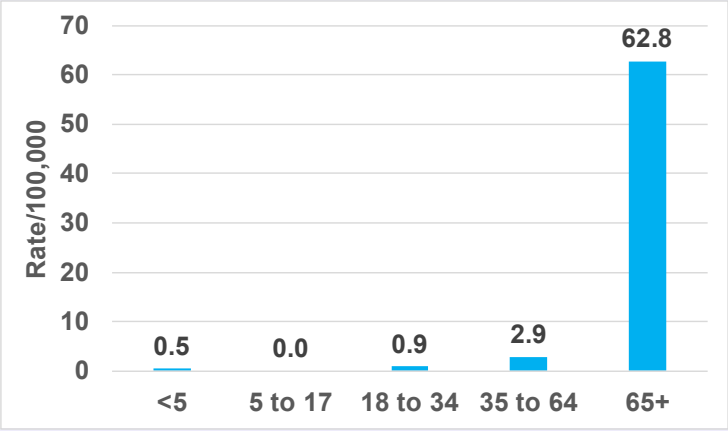
Figure 181. Fall Related Age-Adjusted Mortality Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



healthy montgomery 2030

7.1/100,000

Figure 182. Fall Related Mortality Rates by Age, Montgomery County, 2020-22



Healthy People 2030

63.4 deaths/100,000 population aged 65+ caused by unintentional falls

- Fall related hospitalization rates decreased over time in the County, similar to those in Maryland; the rates in the County were consistently lower than Maryland (Figure 183).
- Among population subgroups, NH-Whites had the highest fall related hospitalization rates, followed by NH-Blacks, Hispanics and Asians/PI; females had higher rates than males (Figure 184).
- Residents aged 65 and older had the highest fall related hospitalization rates compared to all other age groups (Figure 185).

Figure 183. Fall Related Hospitalization Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

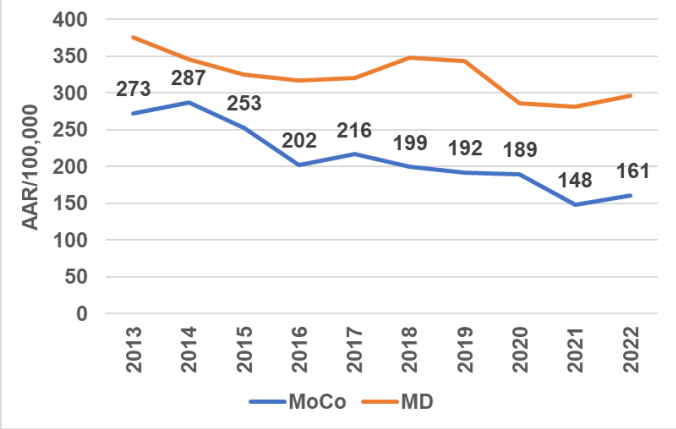
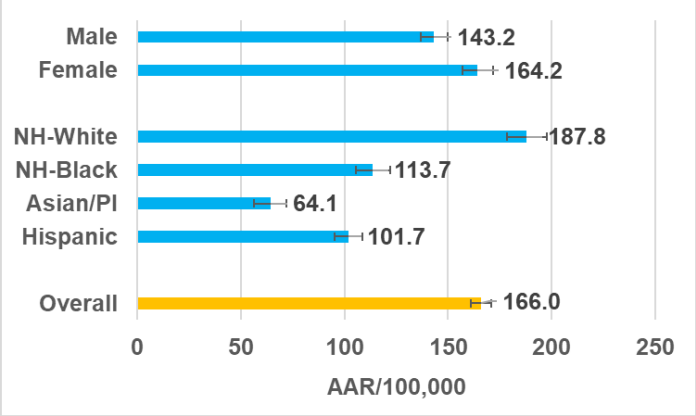
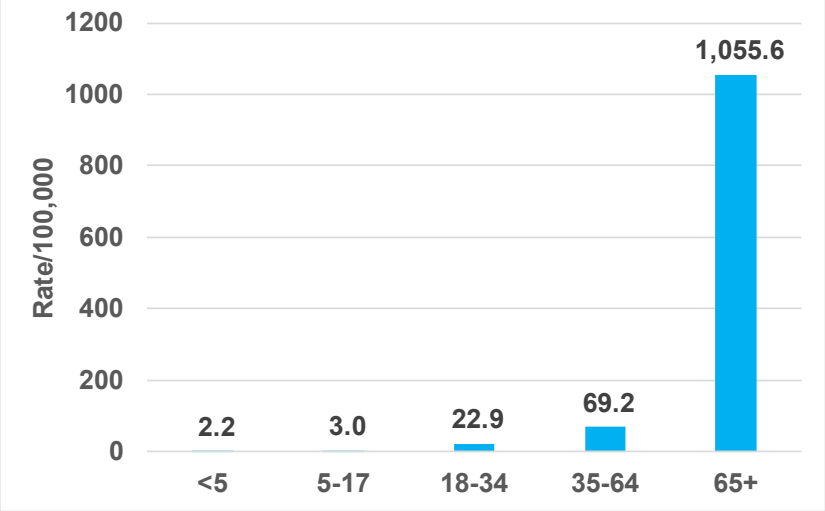


Figure 184. Fall Related Hospitalization Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22

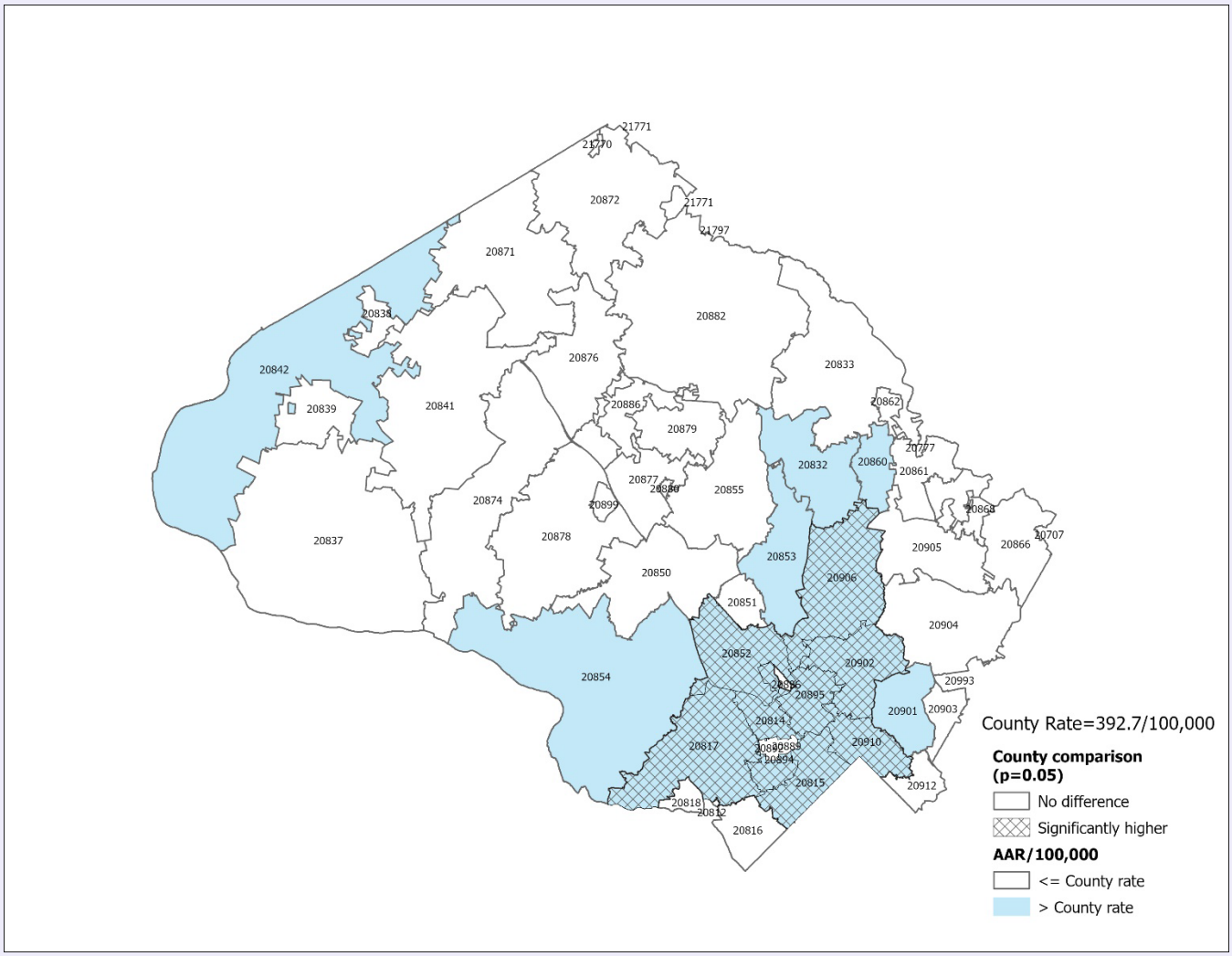


144.3/100,000

Figure 185. Fall Related Hospitalization Rates by Age, Montgomery County, 2020-22



Map 35. Fall Related Hospitalization Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



- Overall fall related ER visit rates decreased over time in the County, similar to those in Maryland; the rates in the County were consistently lower than in Maryland (Figure 186).
- Among population subgroups, NH-Whites had higher fall related ER visit rates, followed by NH-Blacks and Hispanics; females had higher rates than males (Figure 187).
- Residents aged 65+ had the highest rates, followed by those aged under 5 and 5-17 (Figure 188).

Figure 186. Fall Related ER Visit Age-Adjusted Rates, Montgomery County and Maryland, 2013-22

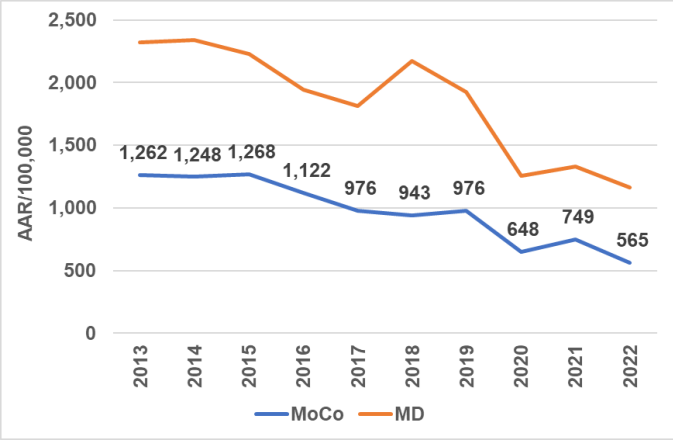
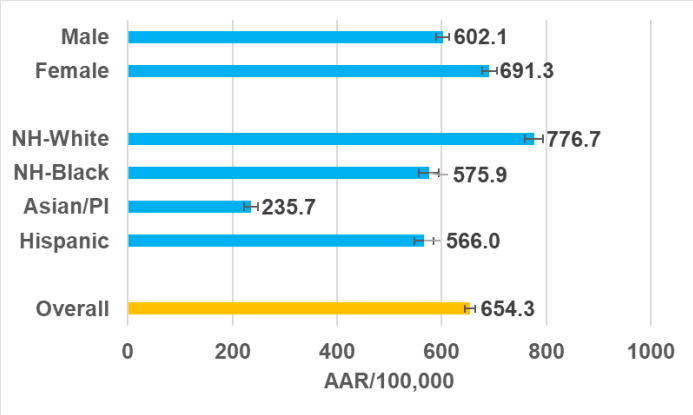
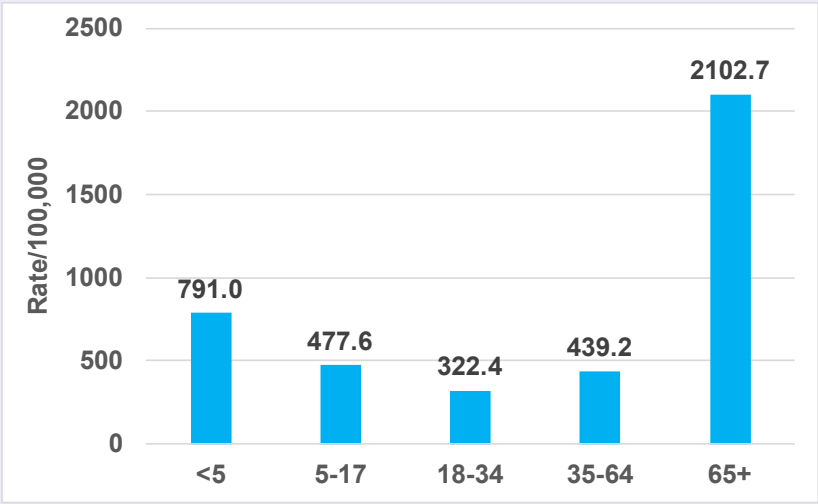


Figure 187. Fall Related ER Visit Age-Adjusted Rates by Sex and Race/Ethnicity, Montgomery County, 2020-22



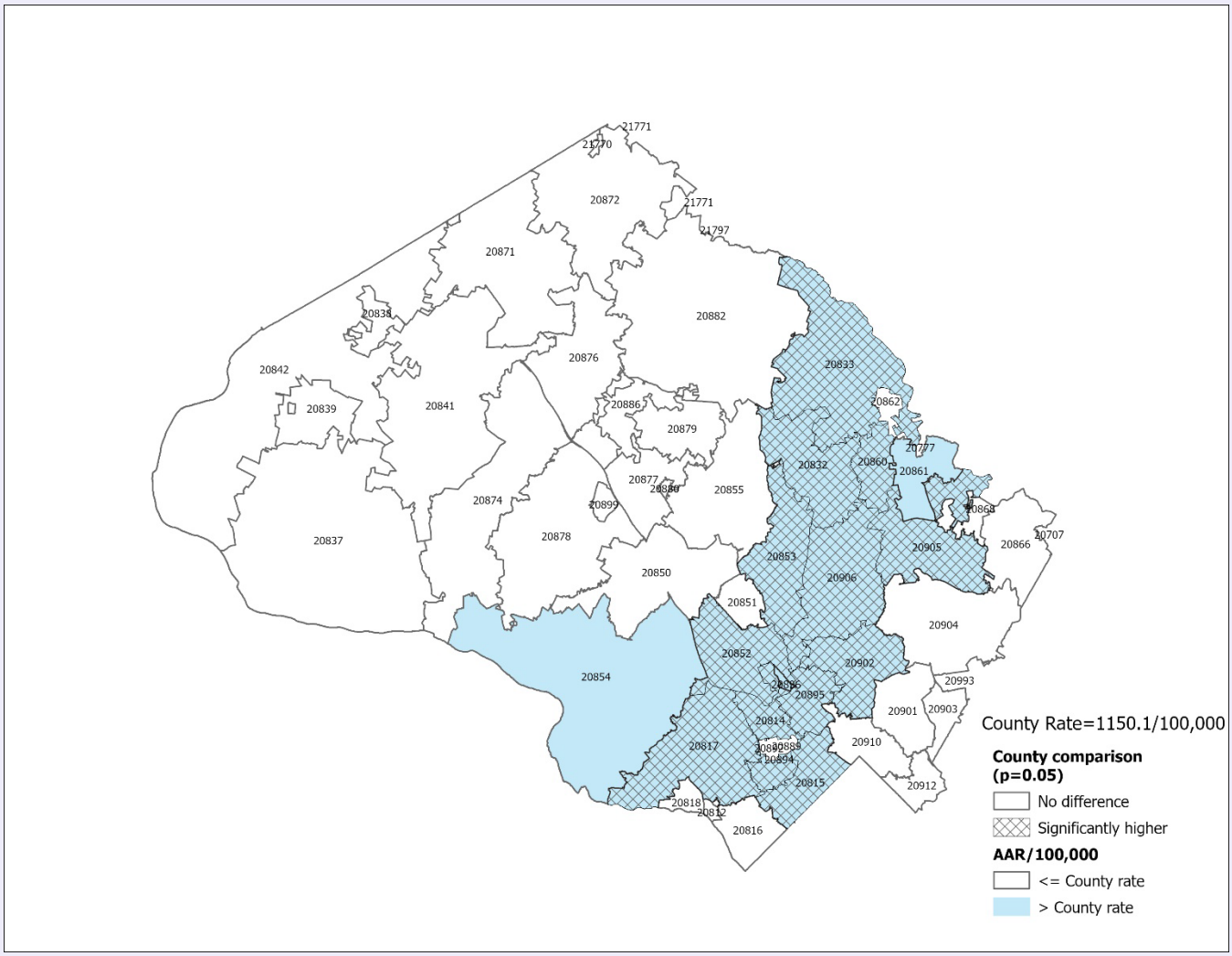
730.3/100,000

Figure 188. Fall Related ER Visit Rates by Age, Montgomery County, 2020-22



5,447 ER visits for falls per 100,000 adults

Map 36. Fall Related ER Visit Age-Adjusted Rates by Zip Code, Montgomery County, 2020-22



Environmental Health

Environmental health encompasses all aspects of the natural and built environment such as air and water quality, chemical exposure, and climate change that may affect the health of individuals and communities. The interactions between humans and environment affect quality of life, years of healthy life lived, and health disparities. The World Health Organization (WHO) defines environment as it relates to health as "all the physical, chemical, and biological factors external to a person, and all the related behaviors [38]." As the world is facing increased environmental challenges, understanding the linkage between environmental factors and health outcomes is important to promote public health and to prevent diseases.

Environmental factors have contributed to a wide range of health conditions including respiratory and cardiovascular diseases, cancer, neurological disorders, and reproductive dysfunctions [39]. Climate change further worsens the issues with more frequent extreme weather events, heatwaves, and the spread of vector-borne diseases. The weather and climate hazards impact health both directly and indirectly by elevating the risk of deaths, noncommunicable disease, and onset and spread of infectious diseases and health emergencies [40]. Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment [41].

Lead Poisoning

- In 2020, 0.4% of children ages 0-6 had blood lead levels of 5-9 ug/dL in Montgomery County, much lower than the percentage in Maryland (0.6%) (Table 30).
- Children ages 0-6 with blood lead levels of 5-9 ug/dL in Maryland consistently decreased from 2000 to 2021 (Figure 189).
- Children ages 0-6 with blood lead levels of >=10 ug/dL in Maryland also consistently decreased from 2000 to 2021 (Figure 190).

Table 30. Children Aged 0-6 Tested for Blood Lead Level, Montgomery County and Maryland, 2020

			MoCo	MD
Children Tested	Age 0-6	Total	98,107	560,837
		No Tested	20,695	110,158
		% Tested	21.1	19.6
Blood Lead Level 5-9 ug/dL				
	Age 0-6	No Tested	84	703
		% Tested	0.4	0.6
Blood Lead Level >=10 ug/dL				
	Age 0-6	No Tested	21	220
		% Tested	0.1	0.2

* Source: Childhood blood lead surveillance report, 2020. Maryland Department of the Environment. http://mde.maryland.gov/programs/LAND/LeadPoisoningPrevention/Pages/index.aspx

Figure 189. Percent Children Age 0-6 Tested with Blood Lead Level 5-9 ug/dL, Maryland, 2000-2021

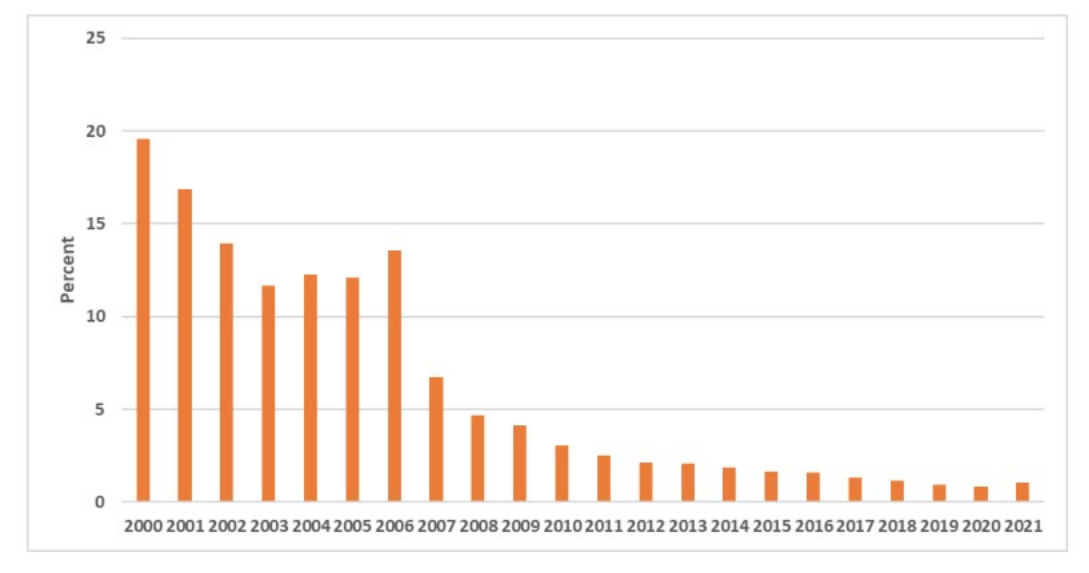
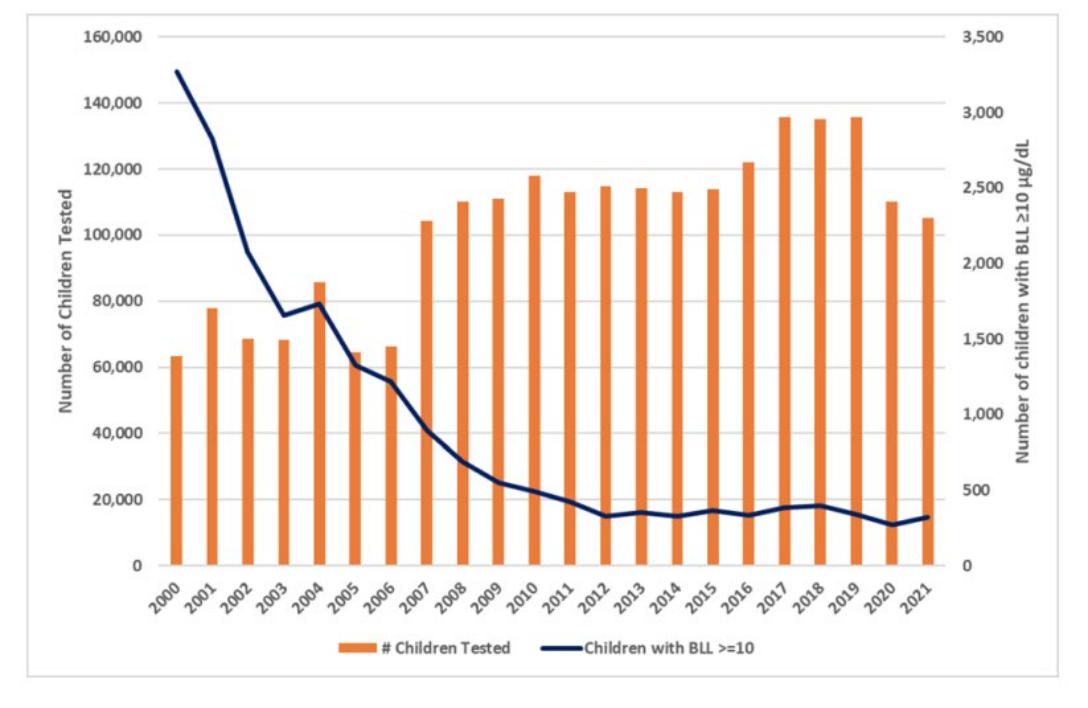


Figure 190. Children Age 0-6 Tested with Blood Lead Level >=10 ug/dL, Maryland, 2000-2021



* Source: Childhood blood lead surveillance report, 2021. Maryland Department of the Environment. http://mde.maryland.gov/programs/LAND/LeadPoisoningPrevention/Pages/index.aspx

Healthy People 2030

97.5% of the population aged 1-5 years old is below 1.18 ug/dL of lead in blood samples

Air Pollution and Water

- Fine Particulate Matter PM2.5 (weighted mean and 98th percentile) level fluctuated in Montgomery County between 2015 and 2022.
- For Ozone, the 4th highest daily max 8-hour average in the year (O3 8-hr Max) in Montgomery County reached levels above the U.S. Environmental Protection Agency air quality standard in 2015. Since 2016, the value of O3 8-hr Max stayed below the national air quality standard of 0.070 ppm.
- The quality of drinking water in Montgomery County meets all required EPA standards, including those for inorganic contaminants, metals, disinfection byproduct, and microbial containments.

Table 31. Selected Air Quality Indicators, Montgomery County, 2015-2022

	2015	2016	2017	2018	2019	2020	2021	2022
PM2.5 Weighted Mean	9.7	6.4	5.2	8.5	6.1	5.9	7.3	7.3
PM2.5 98%ile	22	16	12	18	18	16	17	16
O3 8-hr Max	0.072	0.068	0.065	0.069	0.062	0.059	0.068	0.063
% Unhealthy Days/Year	0	0	0	0	0	0	3	1
% Unhealthy Days for Sensitive Groups/Year	1.4	0	0.7	0	0	0	0.8	0.3

* Highlighted calls indicate above air quality standard
** Source: US Environmental Protection Agency. Air Data: https://www.epa.gov/outdoor-air-quality-data

Table 32. Water Quality, Montgomery County, 2023

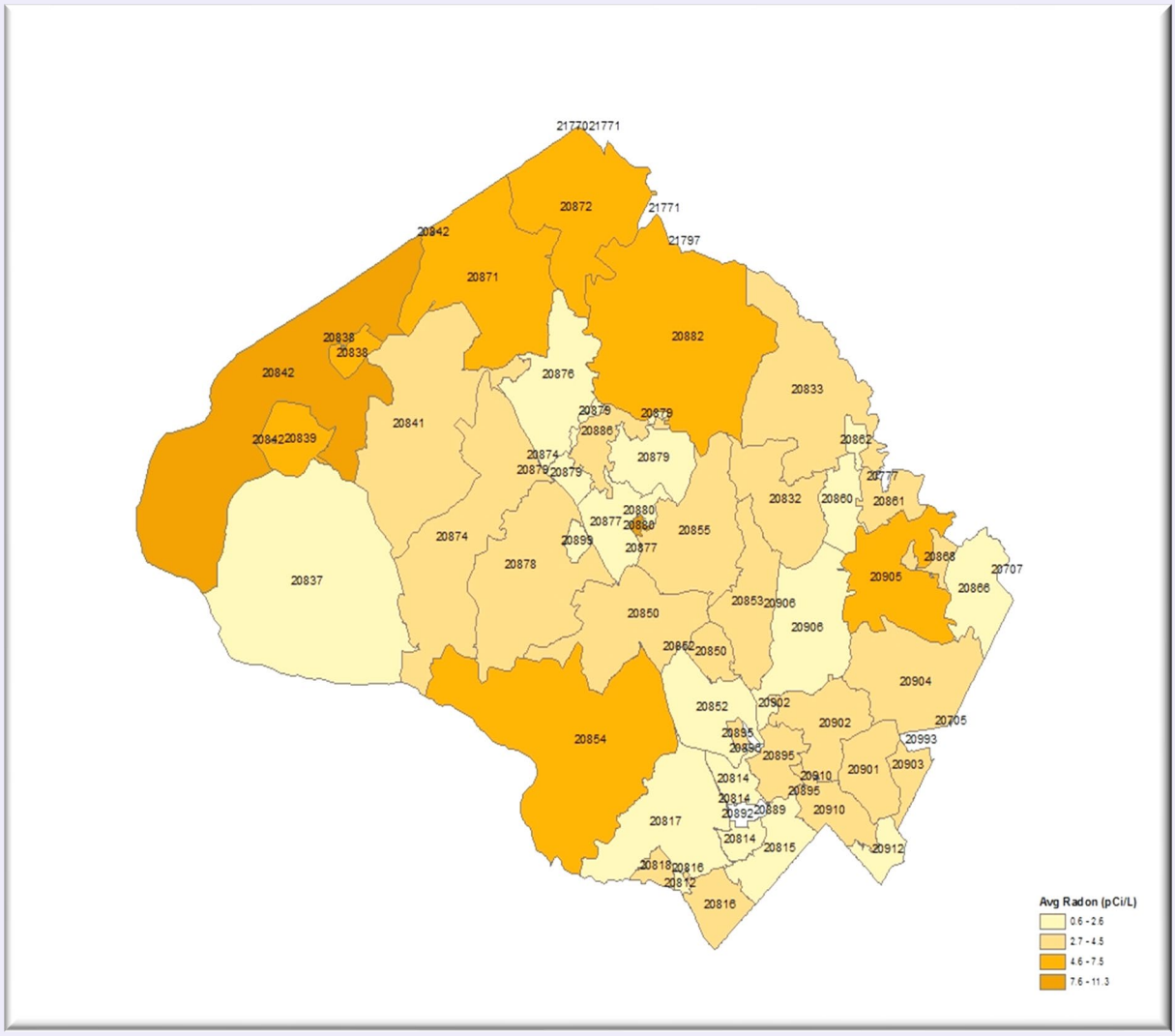
			WSSC			
			Patuxent Tap	Potomac Tap	Rockville	Poolesville
			MCL*			
Inorganic Contaminants						
	Barium (ppm)	2	0.03	0.04	0.032	
	Nitrate (ppm)	10	1.4	2.3	1.3	7
	Fluoride (ppm)	4	0.8	0.8	0.6	0.2
		Action Level (AL)	90th Percentile	# Sites Above AL	90th Percentile	
Metals	Copper (ppm)	1.3	0.12	0/69	0.093	1.3
	Lead (ppb)	15	< 2.0	0/69	NA	0
		MCL		Range	MCL	
Disinfection Byproduct						
	Chlorine (ppm)	4	1.21	0.09-3.0	1.2	0.7
	Haloacetic acids (ppb)	60	46	19-62	25	3
	Trihalomethanes (ppb)	80	68	16-104	59	13
Microbial Containments				MCL		
	Turbidity (NTU)	TT=0.3	0.03	0.04	0.26	
	Residual Chlorine (ppm)	TT>0.2	>0.2	>0.2	1.2	

* MCL- Maximum Contaminant Level
** Source: Maryland Department of the Environment. Consumer Confidence Reports.
https://mde.maryland.gov/programs/Water/water_supply/ConsumerConfidenceReports/Pages/montgomery.aspx
2023 water quality data not available as of January 2025.

Radon

- Radon is a major risk of lung cancer for non-smokers.
- The areas with high average radon level included zip codes of 20854, 20905, 20882, 20872, 20871, 20838, 20939, and 20842 within the County during 2005-16 (Map 29).
- Zip code of 20842 had the highest level of average radon measurements on the northwest side of the County (Map 29).

Map 37. Average Radon Measurements by Zip Code, Montgomery County, 2005-16



Source: Radon in Maryland. Maryland Department of the Environment.
https://phpa.health.maryland.gov/OEHFP/EH/Pages/Radon.aspx

Conclusion

Overall, Montgomery County had lower disease morbidity and mortality than Maryland and the U.S., however disparities existed among population subgroups by sex, race/ethnicity, age, and geographic area. Montgomery County has the most diverse population in Maryland and is becoming more diverse over time. The disease morbidity and mortality, as well as health care utilization and costs associated with changing demography, social determinants, health care access are expected to be impacted exponentially.

It is therefore critical to monitor and evaluate population health and services provided by DHHS programs on an ongoing basis to anticipate ongoing and future challenges. Efforts and resources should be targeted and allocated to address the findings of this report.

With the COVID-19 pandemic occurred in March 2020, the ranking and composition of disease burden on mortality and morbidity shifted. Pandemic impacts on the healthcare utilization should also be taken into account while interpreting the findings based on healthcare utilization data and population health. The top five leading causes of death for County residents between 2020 and 2022 were heart disease, cancer, COVID-19, cerebrovascular disease, and accidents. These leading causes of death remained consistent through 2021, when COVID-19 declined to the 4th of leading cause of mortality in 2022. Heart disease was the leading cause of hospitalization over this period, followed by injury, mental health, COVID-19, cancer, and diabetes. Injury was the leading cause of ER visits during this period, followed by heart disease, mental health, COVID-19, chronic lower respiratory disease, and substance use disorder.

Sex

While heart disease and cancer were the top two leading causes of death for both males and females, COVID-19 emerged as the 3rd leading cause since 2020. Cerebrovascular disease and accidents were the next leading causes for males and females respectively.

Heart disease and injury were the 2 leading causes of hospitalization for both males and females. Both sexes had mental health, COVID-19, and cancer as the remaining top five causes of hospitalization. Males and females had the same leading causes of ER visits. Injury is the leading cause of ER visits during 2020-22, followed by heart disease, mental health, and COVID-19. While chronic lower respiratory disease and diabetes are the 5th and 6th leading cause of ER visits

for females, substance use disorder and chronic lower respiratory disease are the 5th and 6th leading cause of ER visits for males.

Race/Ethnicity

While heart disease, cancer, and COVID-19 were consistently the top three causes of death among NH-Whites, NH-Blacks, and Asian/PIs, COVID-19 was the leading cause of death among Hispanics, followed by cancer, and heart disease.

Heart disease, injuries, and mental health were the top 3 leading causes of hospitalization among NH-Whites and NH-Blacks, cancer was the 3rd leading cause among Asian/PIs. Being mostly impacted by COVID-19, Hispanics had COVID-19 as the top cause of hospitalization, followed by heart disease and injuries. While cancer was the 4th leading cause of hospitalization for NH-Whites, COVID-19 was the 4th leading cause for NH-Blacks and Asian/PIs. The 4th leading cause for Hispanics was mental health. The 5th leading cause of hospitalization was COVID-19 for NH-Whites, diabetes for NH-Blacks and Hispanics, and mental health for Asian/PIs. Injury, heart disease, and mental health were the leading causes of ER visits between 2020 and 2022 across all race/ethnicity groups, except for Hispanics with COVID-19 as the 3rd leading cause. Lower respiratory disease and COVID-19 were the next leading causes of ER visits, except for diabetes as the 5th for Asian/PIs and mental health as the 4th for Hispanics.

Age

While accidents, cancer, heart disease, and COVID-19 were among the leading cause of deaths across different age groups between 2020 and 2022, the leading cause of death for people aged 5-17 and 18-34 was accidents. Cancer was the leading cause of deaths for people aged 35-64, heart disease was for people aged 65+. Cerebrovascular disease was another leading cause of death that impacts people in different age groups.

Mental health was the leading cause of hospitalization for ages 5-17 and 18-34, heart disease for ages 35-64 and those aged 65 and over. Though variations in the order of causes for hospitalization exist among age groups, injury and COVID-19 were consistently among the other leading causes. Substance use disorder was the 3rd and 4th leading cause of hospitalization for persons aged 18-34 and aged 5-17 respectively.

While injury was the leading cause of ER visits consistently across all age groups except for those aged 65 and over, variations existed for other leading causes. Heart disease was the leading cause of ER visits for people aged 65 and over and the 2nd leading cause for those aged 35-64, mental health was the second leading cause for ages 5-17 and 18-34. Diabetes was the third leading cause for people age 65 and over, chronic lower respiratory disease was the third leading cause for ages 5-17 and the 5th for 18-34, and mental health is the third leading cause of ER visits for ages 35-64. COVID-19 was the 4th leading cause of ER visits consistently across all age groups.

Geographic Variations

Geographic variations in morbidity and mortality of health conditions are presented by zip code and census tract. Age-adjusted rates and 95% confidence intervals associated with point estimates are compared with County total rates for statistically significant differences. Geographic variations of conditions such as infectious diseases are presented by zip code, due to the limitation that data for smaller geographical units are not available. The risks of health conditions vary by sex, race/ethnicity, age, and geographic area for population subgroups.

Information presented in this surveillance report can be used to target intervention efforts for population subgroups at high risk of disease morbidity and mortality, to evaluate services provided by DHHS programs, and to better plan and allocate resources. An important use of surveillance data is to monitor trends following the initiation of prevention programs in order to evaluate their effectiveness.

This report is strengthened by the use of data from multiple sources that provide a more comprehensive picture of disease burden and population health than would a single source. Ongoing efforts are being made to further enhance data variety and quality for population health surveillance.

Consumer and provider education are a critical component of disease prevention and health promotion. This can be accomplished through the dissemination of population health statistics and prevention information at professional meetings and conferences.

Pamphlets and brochures with information on disease prevention and health promotion can be provided to patients and clients at providers' offices. This information can also be made available through traditional and online media.

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Frequently Asked Questions

1. *I am interested in looking at a health condition rates by year, but when I read the report, I find only 3 or more years combined rates. Why?*

   Calculating a rate based on less than 20 events in the numerator creates an unstable estimate that is not statistically reliable and varies greatly from year to year by chance alone. Therefore, generating rates based on small numbers can lead to misinterpretation. For this reason, 3 or more years of data are aggregated to create a more stable rate that can be used to compare health conditions by type or another variable of interest.

2. *I would like to see the different types of health conditions in the community I live but cannot find this information in the report. Why doesn't this report show data in smaller geographic area and where can I find this information?*

   Montgomery County consists of three cities, four villages, and thirty-three census-designated places. In a given year, the number of people with specific health conditions may be too small to generate meaningful results for a community or certain geographic areas. Data are summarized in multiple years by Census tract, zip code, or PCSA as appropriate to provide information that is more detailed than county level data. For information on specific geographic area, please contact the Office of Health Planning and Epidemiology at 240-777-1872.

3. *I have noticed many cancer cases or people with certain diseases on my street and in my community. Who can I contact if I want this investigated further?*

   One out of every three Americans will develop some form of cancer in their lifetime, and it is therefore not uncommon to see the occurrence of the disease in a neighborhood. However, there are rare circumstances where cancer clusters are observed. Please contact the Office of Planning and Epidemiology at 240-777-1872 about cancer cluster concerns or for advice and further investigations.

4. *Where can I get more detailed information on disease prevention and health promotion activities?*

   The Office of Health Planning and Epidemiology can be reached at 240-777-1872 for information regarding this report. The CDC Chronic Disease Prevention and Health Promotion (https://www.cdc.gov/chronicdisease/about/prevention.htm) and the Maryland Prevention and Health Promotion Administration (https://phpa.health.maryland.gov/Pages/home.aspx) are good resources for information on disease prevention and health promotion.

5. *How are health conditions defined in this report?*

   Specific diagnostic and procedural codes of the International Classification of Disease (ICD), 9th Revision and 10th Revision (after October 2015) are used to define specific health conditions in this report, they are included in the Appendix. These codes are consistent with those used by the state and federal level to define specific health conditions. The health conditions included in this report are those commonly monitored in the state and federal level, as well as those considered important specific to Montgomery County for surveillance and reporting.

6. *I am interested in some types of health conditions, but I do not see mention of them in this report. Why? How do I get this information?*

   The health conditions included in this report are those commonly monitored in the state and federal level, as well as those considered important specific to Montgomery County for surveillance and reporting. Many rare types of health conditions are not included in this report because the numbers are too small for meaningful tabulations. Please contact the Office of Health Planning and Epidemiology at 240-777-1872 for more information.

7. *This report summarizes data from 2013-2022. It is now 2025. Why is there such a long time between data acquisition and publication?*

   There is a considerable lag time in the data acquisition process. Data from vital records, hospitalization, disease registry, population survey, and Census population estimates are used to generate statistics in this report. Each data source undergoes a quality assurance process that is time-intensive, after it is received, before it can be used for analysis. All these factors contribute to the length of time between the events and reporting.

8. *Why is prevalence used for certain health conditions while incidence is used for others in this report? How are they different?*

   Some certain health conditions are commonly reported as prevalence, while others reported as incidence. Prevalence refers to a condition that tells how widespread a disease is in a population whereas incidence refers to new cases of the disease in the population for a given time. Prevalence is the ratio of the total number of patients with certain health conditions to the total population, whereas incidence is the ratio of total new cases with specific health conditions in a population divided by total population. Some health conditions are better measured and presented by prevalence than incidence, and vice versa.

Appendices

Appendix A: Technical Notes

1. **Data Sources**
   Health Planning and Epidemiology uses various data sources to compile information on population health, including vital records, inpatient and outpatient hospitalization, disease registry, surveys, area health resources file, and Census. Vital records including births and deaths are provided by the Vital Statistics Administration of the Maryland Department of Health. Hospitalization data including inpatient and outpatient visits are provided by the Maryland Health Services Cost Review Commission. Cancer incidence data are provided by the Maryland Cancer Registry, whereas data on infectious diseases are provided by the Infectious Disease Bureau of Maryland Department of Health. Behavioral Risk Factor Surveillance System (BRFSS) data and Youth Risk Behavior Survey (YRBS) data are provided by the Cancer and Chronic Disease Bureau of the Maryland Department of Health. Information on prevalence estimates of certain behavioral health topics is from the National Survey on Drug Use and Health (NSDUH) of Substance Abuse and Mental Health Services Administration (SAMHSA). Vaccination coverage estimates are from the National Immunization Survey (NIS) of the Centers for Disease Control and Prevention. Area Health Resource File (AHRF) is from the U.S. Department of Health and Human Service's Health Resources & Services Administration (HRSA). Data on population estimates are derived from the American Community Survey (ACS) of the U.S. Census Bureau.

   In addition, Health Planning and Epidemiology uses other data sources such as program data collected in electronic medical records and the electronic integrated case management system to conduct surveillance and program evaluation. These datasets are used to produce statistical information for health care professionals, researchers, and policy makers as part of surveillance activities.

2. **Data Quality and Confidentiality**
   Data quality is assessed on a routine basis, in terms of completeness, timeliness and accuracy, and is documented to help interpret results from analyzing these population datasets. All data collected and housed by Health Planning and Epidemiology complies with the state and federal privacy and confidentiality regulations. Data or data analysis may be requested through the Health Planning and Epidemiology.

3. **Disparities on Race and Ethnicity**
   Health Planning and Epidemiology follows the recommendation of the National Center for Health Statistics of classifying health conditions according to the self-reported race/ethnicity of the individual. Information on race/ethnicity recorded in each data source is used to illustrate disease burdens for population subgroups. There are variations of data quality on race/ethnicity recorded in each population dataset, in terms of completeness and accuracy, thus interpretations of results are to take this into

consideration. Though this information can be used to address important topics such as health equity, race/ethnicity is a self-reported item and is subject to the usual limitations of this type of information.

4. **Rate**

The rates provided in this report are estimations of the proportion of population with specific health conditions. This rate is usually expressed as per 100,000 population and is calculated by the formula:

$$\text{Rate} = \frac{\text{Number of Persons with Specific Conditions}}{\text{Total Population}} * 100{,}000$$

5. **Population Weights**

Population estimates for Montgomery County are based on data from the U.S. Census Bureau. The 2000 U.S. standard population weights are used in calculating age-adjusted rates in this report as shown below.

Table 1. Master list: 2000 U.S. projected population and age-adjustment weights

Age	*Population in thousands*	*Adjustment weight*
All ages	**274,634**	**1.000000**
Under 1 year	3,795	0.013818
1 year	3,759	0.013687
2–4 years	11,433	0.041630
5 years	3,896	0.014186
6–8 years	11,800	0.042966
9 years	4,224	0.015380
10–11 years	8,258	0.030069
12–14 years	11,799	0.042963
15–17 years	11,819	0.043035
18–19 years	8,001	0.029133
20–24 years	18,257	0.066478
25–29 years	17,722	0.064530
30–34 years	19,511	0.071044
35–39 years	22,180	0.080762
40–44 years	22,479	0.081851
45–49 years	19,806	0.072118
50–54 years	17,224	0.062716
55–59 years	13,307	0.048454
60–64 years	10,654	0.038793
65–69 years	9,410	0.034264
70–74 years	8,726	0.031773
75–79 years	7,415	0.027000
80–84 years	4,900	0.017842
85 years and over	4,259	0.015508

6. **Age-adjusted Rates**
   Age-adjusted rates refer to the number of events that would be expected per 100,000 persons in a selected population if that population had the same age distribution as a standard population. For this report, the standard population used is the U.S. 2000 standard population. Age-adjusted rates allow for comparisons of different population groups by controlling for the effects of differences in age between populations.

   Age-adjusted rates were calculated using the direct method as follows.

$$\hat{R} = \sum_{i=1}^{m} s_i(d_i/p_i) = \sum_{i=1}^{m} w_i d_i$$

where,
m = number of age groups
d_i = number of events in age group i
P_i = population in age group i
S_i = proportion of the standard population in age group i
This is a weighted sum of Poisson random variables, with the weights being (S_i/p_i)

   * Reliability of Rates

   Several important notes should be kept in mind when examining rates.

- Rates based on small numbers of events can show considerable variation (e.g., less than 20 events). This limits the usefulness of these rates in comparisons and estimations of future occurrences.
- Unadjusted rates are not reliable for drawing definitive conclusions when making comparisons, because they do not take factors such as age distribution among populations into account. Age-adjusted rates offer a more refined measurement when comparing events over geographic areas or time periods.
- When a difference in rates appears to be significant, care should be exercised in attributing the difference to any particular factor or set of factors. Many variables may influence rate differences. Interpretation of a rate difference requires substantial data and exacting analysis.

7. **Graphs**
   Graphs have varying scales depending on the range of the data displayed. Therefore, cautions should be exercised when comparing such graphs.

8. Standard Errors

The standard errors (S.E.) of the rates were calculated using the following formula:

$$S.E.= \sqrt{\frac{w_j^2 n_j}{p_j^2}}$$

where,

- w_j = fraction of the standard population in age category
- n_j = number of cases in that age category
- p = person-years denominator

9. Confidence Intervals (CI)

The confidence interval is a method of assessing the magnitude and stability of a rate or ratio. The 95% CI represents a range of values that has a 95% probability of including the true rate or ratio. Observed rates are subject to statistical variation. Thus, even if the underlying risk of specific health condition is identical in two subpopulations, the observed rates for the subpopulations may differ because of random variation. The confidence interval describes the precision of the observed rate as an estimate of the underlying risk of having a specific health condition, with a wider interval indicating less certainty about this estimate. The width of the interval reflects the size of the subpopulation and the number of cases with specific health conditions. Smaller subpopulations with fewer health conditions lead to wider confidence intervals. The 95% confidence intervals used in the report are based on the *Poisson* distribution.

The standard error can be used to calculate the confidence interval. If the interval produced for one rate does not overlap the interval for another, the probability that the rates are statistically different is 95% or higher.

(This test can be inaccurate for rates based on fewer than 10 events.) The formula used is:

$$R \pm z\,(SE)$$

where,

- R=age-adjusted rate of one population
- z = 1.96 for 95% confidence limits
- SE= standard error as calculated above

Appendix B: Codes for Health Conditions

	Hospitalization and ER Visit		Mortality
	ICD-9	**ICD-10**	**ICD-10**
Chronic Disease			
All cancer sites	140-142(0-9), 143-144(0,1,8,9), 145-148(0-9), 149(0,1,8,9), 150(0-5,8,9), 151(0-6,8,9), 152(0-3,8,9), 153(0-9), 154(0-3,8), (155,156)(0,2), 157(0-4,8,9), 158(0,8,9), 159(0,1,8,9), 160(0-9), 161(1,3,8,9), 162(0,2,3-5,8,9), 163(9), 164(0,1,3,8,9), 165(0,8,9), 170(0-9), 171(0,2-9), 172(0-9), 173(10,-12,19-22,29-32,39-42,49-52,59-62, 69-72,79 -82, 89-92,99), 174(0-6,8,9), 175(0,9), 176(0-6,8,9), 179, 180(0,1,8,9), 181, 182(0,1,8), 183(0,2-5,9), 184(0-4,8,9), 185, 186(0,9), (187,188)(1-9), 189(0-4,8,9), (190,191)(0-9), 192(0-3,8,9), 193, 194(0-7,8,9), 195(0-5,8), 196(0-3,5,6,8,9), 197(0-8), 198(0-7,81,82,89), 199.1, 209 3(1-6)	C00-C97	C00-C97
Lung and bronchus cancer			C34
Female breast cancer			C50 (female only)
Colon and Rectum cancer			C18-C20, C26.0
Prostate cancer			C61
Cerebrovascular disease	463, 348, 430-438, 443	I60-I69	I60-I69
Chronic lower respiratory disease	490, 491, 493, 496	J40-J47	J40-J47
Diabetes	249(00,10-90), 250(00,01,10,11,20,30,31,40,41,50,51,60,61,70,71,80,81,90,91), 349.89, 353.5, 355.9, 357.2, 362.0(1,2,4-7), 366.41, 443.81, 523.8, 536.3, 713.5, 716.80, 785.4	E10-E13	E10-E13
Heart Disease	390-398, 400-405, 410-417, 420-429	I00-I51	I00-I51
Infectious Disease			
COVID-19		U071	U071

	Hospitalization and ER Visit		Mortality
	ICD-9	**ICD-10**	**ICD-10**
Behavioral Health			
Mental Health	295-299, 301, 306, 308-309,311-314, 316, 293(8,9), (295-296)(0-9), 297(1-3,8-9), 298(1-4,8-9), 299(0-1,8-9), (301,302,306)(0-9), 307(1-8), 308(0-4,9), (309,313)(0-4,8-9), 310(1), 312(1-4,8), 314(0-2,8-9), 648(4), 293.8(1-4,9), 295(0-9)(0-5), 296(0-6)(0-6), 296.8(0-2,9), 296.9(0,9), 299(0-1,8-9)(0-1), 300.0(0-2,9), 300.1(0-6,9), 300.2(0-3,9), 300.8(1-2,9), 301.1(0-3), 301.2(0-2), (301.5,307.8)(0-1,9), 301.8(1-4,9), 302.5(0-3), (302.7,307.4)(0-9), 302.8(1-5,9), 306.5(0-3,9), 307.2(0-3), 307.5(0-4,9), 309.2(1-4,8-9), 312(0-2)(0-4), 312.3(0-5,9), 312.8(1-2,9), 313.2(1-3), 313.8(1-3,9), 314.0(0-1), 648.4(0-4), E950-E959, E950(0-9), E951(0-1,8), 95(2,3) (0-1,8-9), (955,958) (0-9), 957(0-2,9), V40(2,3), V403(1,9), V409, V628.4, V673.	F01.50, F02.81, F03.9(0-1), F04-F05, F06.0-F06.2, F063.0, F06.4, F06.8, F07.0, F20.0-F20.2, F20.5, F20.9, F21-F24, F25.9, F28-F29, F30.1(0-3), F30(2-4,8,11-13), F31.2, F313(0 -5), F316(0-4), F31.7(3-8), F31.81, F31.9, F32.0-F33.3, F33.4(1-2), F33.9-F34.1, F34.8, F39, F40.0(1-2), F40.10, F40.218, F40.24(0-1), F40.8-F41.1, F41.8-F41.9, F42, F43.0, F43.1(0,2), F43.12, F43.2(0-5,9), F43.8, F44(0,1,4,6), F44.8(1,9), F44.9-F45.1, F45.2(1,2), F45.4(1,2,8,9), F45.4, F45.8-F45.9, F48(1,2,8,9), F50.00 F50(2,8,9), F51.0(1,2,3,9), F51.1(1,2,9), F51.1(2,9), F51(3,8,9), F52.0, F52.1,F52.21, F52.3(1,2), F524 , F525, F526, F528, F53, F54, F59, F60(0,3-7), F60.8(1,9), F60.89, F60.9, F63.0-F63, F63.8(1,9), F63.9, F64.1, F64.2, F65.4, F65.5(1,2), F65.8(1,9), F65.9, F66, F68.1(1,2,8), F69-F73, F79, F80(0,1,2,4,81,89), F810, F812, F81.8, F81.8(1,9), F82, F84(0,3,5,8,9), F88, F89, F90(0,1,2,8,9), F90(1,2,8,9), F91.1-F91.3, F91.8, F91.9, F93.0, F93, F93.9, F94.1, F94.8, F95.0-F95.2, F95.9, F98.0-F98.2, F98.2(1,9), F98.3-F98.5, F98.8, F98.9, F99; G21.0, G30.9, G31.0(1,9), G31.1, G31.83, G44.209, G62.1, O90.6, O99.34(0-5), R45.85, R46.6, R46.81, T14.91, T36-T65, T71, X71.8, X71.9, X72, X73.0, X73.1, X73.2, X73.9, X74.0(1,2,8,9), X75, X76, X77.2, X78.9, X80, X81, X82.8, X83.0, X83.1, X83.2, X83.8, V62.84	

Drug-induced Deaths			D52.1,D59.0,D59.2,D61.1,D64.2,E06.4,E16.0,E23.1,E24.2,E27.3,E66.1,F11.0-F11.5,F11.7-F11.9,F12.1-F12.5,F12.7-F12.9,F13.1-F13.5,F13.7-F13.9,F14.1-F14.5,F14.7-F14.9,F15.1-F15.5,F15.7-F15.9,F16.1-F16.5,F16.7-F16.9,F17.3-F17.5,F17.7-F17.9,F18.0-F18.5,F18.7-18.9,F19.0-F19.5,F19.7-F19.9,G21.1,G24.0,G25.1,G25.4,G25.6,G44.4,G62.0,G72.0,I95.2,J70.2-J70.4,K85.3,L10.5,L27.0-L27.1,M10.2,M32.0,M80.4,M81.4,M83.5,M87.1,R50.2,R78.1-R78.5,X40-X44,X60-X64,X85,Y10-14
Substance Abuse	E291, E929, E303-E305, E357.5, E425.5, E535, E571, E357.5, E648.3, E779.5, E965-E970, E975, E980	F1110, F1111, F11120, F11121, F11122, F11129, F1114, F11150, F11151, F11159, F11181, F11182, F11188, F1119, F1120, F1121, F11220, F11221, F11222, F11229, F1123, F1124, F11250, F11251, F11259, F11281, F11282, F11288, F1129, F1190, F11920, F11921, F11922, F11929, F1193, F1194, F11950, F11951, F11959, F11981, F11982, F11988, F1199, F1210, F1211, F12120, F12121, F12122, F12129, F12150, F12151, F12159, F12180, F12188, F1219, F1220, F1221, F12220, F12221, F12222, F12229, F12250, F12251, F12259, F12280, F12288, F1229, F1290, F12920, F12921, F12922, F12929, F12950, F12951, F12959, F12980, F12988, F1299, F1310, F1311, F13120, F13121, F13129, F1314, F13150, F13151, F13159, F13180, F13181, F13182, F13188, F1319, F1320, F1321, F13220, F13221, F13229, F13230, F13231, F13232, F13239, F1324, F13250, F13251, F13259, F1326, F1327, F13280,	X40–X49, X60–X69, X85–X90, Y10–Y19, Y35.2, U01(.6–.7)

		F13281, F13282, F13288, F1329, F1390, F13920, F13921, F13929, F13930, F13931, F13932, F13939, F1394, F13950, F13951, F13959, F1396, F1397, F13980, F13981, F13982, F13988, F1399, F1410, F1411, F14120, F14121, F14122, F14129, F1414, F14150, F14151, F14159, F14180, F14181, F14182, F14188, F1419, F1420, F1421, F14220, F14221, F14222, F14229, F1423, F1424, F14250, F14251, F14259, F14280, F14281, F14282, F14288, F1429, F1490, F14920, F14921, F14922, F14929, F1494, F14950, F14951, F14959, F14980, F14981, F14982, F14988, F1499, F1510, F1511, F15120, F15121, F15122, F15129, F1514, F15150, F15151, F15159, F15180, F15181, F15182, F15188, F1519, F1520, F1521, F15220, F15221, F15222, F15229, F1523, F1524, F15250, F15251, F15259, F15280, F15281, F15282, F15288, F1529, F1590, F15920, F15921, F15922, F15929, F1593, F1594, F15950, F15951, F15959, F15980, F15981, F15982, F15988, F1599, F1610, F1611, F16120, F16121, F16122, F16129, F1614, F16150, F16151, F16159, F16180, F16183, F16188, F1619, F1620, F1621, F16220, F16221, F16229, F1624, F16250, F16251, F16259, F16280, F16283, F16288, F1629, F1690, F16920, F16921, F16929, F1694, F16950, F16951, F16959, F16980, F16983, F16988, F1699, F17200, F17201, F17203, F17208, F17209, F17210, F17211, F17213, F17218, F17219, F17220, F17221, F17223, F17228, F17229, F17290, F17291, F17293, F17298, F17299, F1810, F1811, F18120, F18121, F18129, F1814, F18150, F18151, F18159, F1817, F18180, F18188, F1819, F1820, F1821, F18220, F18221, F18229, F1824, F18250, F18251, F18259, F1827, F18280, F18288, F1829, F1890, F18920, F18921, F18929, F1894, F18950, F18951, F18959, F1897, F18980, F18988, F1899, F1910, F1911, F19120, F19121, F19122, F19129, F1914, F19150, F19151, F19159, F1916, F1917, F19180, F19181, F19182, F19188, F1919, F1920, F1921, F19220, F19221,	

		F19222, F19229, F19230, F19231, F19232, F19239, F1924, F19250, F19251, F19259, F1926, F1927, F19280, F19281, F19282, F19288, F1929, F1990, F19920, F19921, F19922, F19929, F19930, F19931, F19932, F19939, F1994, F19950, F19951, F19959, F1996, F1997, F19980, F19981, F19982, F19988, F1999, F550, F551, F552, F553, F554, F558, O355XX0, O355XX1, O355XX2, O355XX3, O355XX4, O355XX5, O355XX9, O99320, O99321, O99322, O99323, O99324, O99325, P0441, P0449, P961, P962, T400X1A, T400X1D, T400X1S, T400X3A, T400X3D, T400X3S, T400X4A, T400X4D, T400X4S, T400X5A, T400X5D, T400X5S, T400X6A, T400X6D, T400X6S, T401X1A, T401X1D, T401X1S, T401X3A, T401X3D, T401X3S, T401X4A, T401X4D, T401X4S, T401X5A, T401X5D, T401X5S, T405X1A, T405X1D, T405X1S, T405X3A, T405X3D, T405X3S, T405X4A, T405X4D, T405X4S, T405X5A, T405X5D, T405X5S, T405X6A, T405X6D, T405X6S, T407X1A, T407X1D, T407X1S, T407X3A, T407X3D, T407X3S, T407X4A, T407X4D, T407X4S, T407X5A, T407X5D, T407X5S, T407X6A, T407X6D, T407X6S, T408X1A, T408X1D, T408X1S, T408X3A, T408X3D, T408X3S, T408X4A, T408X4D, T408X4S, T408X5A, T408X5D, T408X5S, T40901A, T40901D, T40901S, T40903A, T40903D, T40903S, T40904A, T40904D, T40904S, T40905A, T40905D, T40905S, T40906A, T40906D, T40906S, T40991A, T40991D, T40991S, T40993A, T40993D, T40993S, T40994A, T40994D, T40994S, T40995A, T40995D, T40995S, T40996A, T40996D, T40996S	

Suicide	E950–E959	T14.91, T36-T65, T71, X71-X83	X60–X84, Y87.0, U03
Injury			
Accidents			V01–X59, Y85-Y86
All injury	All E-codes	R50.2, T14.91, T15.0, T15.1, T15.8, T15.9, T16.1, T16.2, T16.9-T17.4, T17.8-T18.5, T18.8-T194, T19.8-T19.9, T36.0-T50.9, T50.A (A, B, Z), T51.0-T51.3, T51.8-T52.4, T52.8-T74.0, T75.3, V00.01-V00.02, V00.09, V00.11-V00.158, V00.18, V00.21, V00.22, V00.28, V00.28, V00.31, V00.32, V00.38, V00.81, V00.82-V00.83, V00.89, V01.00-V01.02, V01.09-V01.12, V01.19, V01.90-V01.92, V01.99-V02.02, V02.09-V02.12, V02.19-V029.2, V02.99-V03.02, V03.09-V03.12, V03.19, V03.90, V03.99-V04.12, V04.19, V04.90-V04.92, V04.99-V05.02, V05.09-V05.12XS, V05.19-V05.92, V05.99-V06.02, V06.09-V06.12, V06.19, V06.90-V06.92, V06.99, V09.00-V09.01, V09.09, V09.1, V09.20, V09.21, V09.21, V09.29, V09.3, V09.9-V10.5, V10.9-V11.5, V11.9-V12.5, V12.9-V13.5, V13.9-V145, V14.9-V15.5, V15.9-V16.5, V16.9-V17.5, V17.9-V18.5, V18.9-V19.5, V19.9-V20.5, V19.9-V20.5, V20.9-V21.5, V21.9-V22.5, V22.9-V23.5, V23.9-V24.5, V24.9-V25.5, V25.9-V26.5, V26.9-V27.5, V27.9-V28.5, V28.9-V29.5, V29.59-V29.60, V29.69, V2981, V29.88-V99, W00.0-W00.2, W00.9-W01.111, W01.118-W01.119, W01.198, W03-W05, W12, W13.0-W13.4, W13.8, W13.9, W14-W16, W17.0, W17.4, W17.8-W17.82, W17.89-W18.12, W18.2, W18.31, W18.39-W18.43, W18.49, W19-X99, Y00-Y021, Y02.8, Y030, Y038, Y040-Y042, Y04.8, Y07.01-Y07.04, Y07.11-Y07.14, Y07.4-Y07.5, Y07.9, Y08, Y08.8, Y09, Y21.0, Y21.4-Y21.9, Y22-Y38, Y62.0-Y66, Y69, Y83.0-Y83.6, Y83.8-Y84.9, Y92.00(0,1,2,3,7,8,9), Y92.0(10-46,48,49,00,91-96,98,99), Y92.10, Y92.1(10,11-16,18-31,33,35-63,68,69,90-99), Y92.2(6,9,10-15,18,19,22,23,31-34,38-43,48,50-54),	V01–Y36, Y85–Y87, Y89, U01–U03

		Y92.3(10-12,18,20-22,28,30-31,34,39), Y92.4(10-15,80,82,88), Y92.5(10-13,20-24), Y92.5(30-32,38,59), Y92.6(1-5,9), Y92.7(1-4,9), Y92.8(4-6,9,10-16,18,20-21,28,30-34,38), Y92.9, Y930(1,2), Y93.1(1-9), Y93.2(1-4,9), Y93.29, Y93.3(1-5,9), Y93.4(1-5,9), Y93.5(1-5,6,7,9), Y93.6(1-9,A), Y93.7(1-5,9), Y93.8(1-4,8,9), Y93.9(A1-A6,A9,B1-B4,B9,C1-C2,C9,D1-D3,D9,E1-E6,E8,E9,F1-F2,F9,G1-G3,G9, H1-H3,H9,I1,I9,J1-J4, K1-K3,K9), Y99.0, Y99.1, Y99.2, Y99.8, Y99.9	
Fall	E880–E886, E888	W00–W19	W00–W19
Firearm	E922.0–E922.3, E922.8, E922.9, E955.0–E955.4, E965.0–E965.4, E985.0–E985.4, E970, E979.4	W32-W34, X73-X74, X93-X95, Y22-Y24, Y35, Y38	W32–W34, X72–X74, X93–X95, Y22–Y24, Y35.0, U01.4
Motor Vehicle	E810–E819, E958.5, E968.5, E988.5	V02–V04(1,9), V05(1), V09(2), (V12-V14)(4,5,9), V19(4-6), V20(4,5,9), V21(3-5,9), V22(9), (V23-V28)(4,5,9), V29(4-6,8,9), (V30-V38, V40-V48, V50-V58, V60-V68, V70-V78)(5-7,9), (V39, V49, V59, V69, V79)(4-6,8,9), V80(3-5), (V81, V82)(1), (V84-V86)(0-3), V87(0-9), V89(2,3,9)	V02–V04(.1, .9), V09.2, V12–V14(.3–.9), V19(.4–.6), V20–V28(.3–.9), V29(.4–.9), V30–V39(.4–.9), V40–V49(.4–.9), V50–V59(.4–.9), V60–V69(.4–.9) V70–V79(.4–.9), V80 (.3–.5), V81.1, V82.1, V83–V86(.0–.3), V87(.0–.8), V89.2

Appendix C: Sources of Additional Information

For more information on populations, health conditions, risk factors, prevention, disease burdens, programs and efforts to address specific health conditions in the county, state, and national level, please refer to the following resources:

- Montgomery County Department of Health and Human Services
  http://www.montgomerycountymd.gov/hhs/

- Healthy Montgomery
  https://www.montgomerycountymd.gov/healthymontgomery/

- Maryland Department of Health
  https://health.maryland.gov/pages/index.aspx

- Maryland Health Services Cost Review Commission (HSCRC)
  http://www.hscrc.state.md.us/Pages/default.aspx

- American Community Survey (ACS), U.S. Census Bureau
  https://www.census.gov/programs-surveys/acs/

- American Health Rankings
  https://www.americashealthrankings.org

- National Center for Health Statistics (NCHS), Center for Disease Control and Prevention
  https://www.cdc.gov/nchs/index.htm

- Behavioral Risk Factor Surveillance System (BRFSS), Centers for Disease Control and Prevention
  https://www.cdc.gov/brfss/index.html

- Maryland Youth Risk Behavior Survey
  https://phpa.health.maryland.gov/ccdpc/Reports/Pages/yrbs.aspx

- Maryland Pregnancy Risk Assessment Monitoring System (PRAMS)
  https://health.maryland.gov/phpa/mch/Pages/prams.aspx

- CDC Places: Local Data for Better Health
  https://www.cdc.gov/places/index.html

- Healthy People 2020. U.S. Department of Health and Human Services
  https://www.healthypeople.gov/

- Healthy People 2030. U.S. Department of Health and Human Services
  https://health.gov/healthypeople

- County Health Rankings and Roadmaps. A Robert Wood Johnson Foundation Program

http://www.countyhealthrankings.org/

- Dartmouth Atlas of Health Care
  http://www.dartmouthatlas.org/

- Health Resources and Services Administration (HRSA)
  https://www.hrsa.gov/

- Substance Abuse and Mental Health Services Administration (SAMHSA)
  https://www.samhsa.gov/

- Air Data, U.S. Environmental Protection Agency (EPA)
  https://www.epa.gov/outdoor-air-quality-data

- Consumer Confidence Reports, Maryland Department of the Environment
  http://mde.maryland.gov/programs/Water/water_supply/ConsumerConfidenceReports/Pages/index.aspx

- National Immunization Survey (NIS)
  https://www.cdc.gov/vaccines/imz-managers/coverage/nis/child/index.html

Health Planning and Epidemiology Publications

- Health in Montgomery County 2008-2016: A Surveillance Report on Population Health https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/PopHealthReportFINAL.pdf

- Health in Montgomery County 2010-2019: A Surveillance Report on Population Health https://www.montgomerycountymd.gov/healthymontgomery/Resources/Files/Reports/Health-in-Montgomery-County-2010-19%20Final.pdf

- Uninsured Population in Montgomery County, MD, 2017-2022: Health Status and Healthcare Access among Montgomery Cares Participants https://www.montgomerycountymd.gov/HHS/Resources/Files/pdfs/Report%20on%20Uninsured%20Population.pdf

- Health Survey in Montgomery County, MD, 2022: A Survey on Health Status and Behaviors https://www.montgomerycountymd.gov/healthymontgomery/Resources/Files/Reports/Health%20Survey%20Report_Final.pdf

- Health Equity in Montgomery County, MD: Healthy Montgomery Core Indicators 2010-2018 https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/Health%20Equity%20Report_HM%20Core%20Measures%202010-2018.pdf

- Health Equity in Montgomery County, MD: Healthy Montgomery Core Indicators 2013-2021 https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/Health%20Equity%20Report_HM%20Core%20Measures%202013-2021.pdf

- The Zip Code Ranking Project 2016-2018: Evaluation of Health Factors and Health Outcomes in Montgomery County, MD https://www.montgomerycountymd.gov/healthymontgomery/Resources/Files/HM-Resources/Publications/Zipcode%20Ranking%20Final%20Results.pdf

- The Zipcode Ranking Project 2018-2020: Evaluation of Health Factors and Health Outcomes in Montgomery County, MD https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/Zipcode%20Ranking%202018-2020.pdf

- Report on Infectious Disease, 2013-2017 https://www.montgomerycountymd.gov/healthymontgomery/Resources/Files/HM-Resources/Publications/Infectious%20Disease%20Report_10-15-18_FINAL.pdf

- COVID-19 Surveillance Report in Montgomery County, MD 2020-2022 https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/COVID-19%20Surveillance%20Report%202020%20-%202022_Final%20v2.pdf

- Maternal and Infant Health in Montgomery County, Maryland 2008-2017 https://www.montgomerycountymd.gov/HHS/Resources/Files/MaternalInfantHealthReport.pdf

- Maternal and Infant Health in Montgomery County, Maryland 2012-2021 https://www.montgomerycountymd.gov/HHS/Resources/Files/MIH%20Report_2012-2021.pdf

- Healthy Montgomery 2023 Goals and Objectives https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/HM2023%20Goal%20Setting.pdf

- Healthy Montgomery 2030 Goals and Objectives https://www.montgomerycountymd.gov/HHS/Resources/Files/Reports/Healthy%20Montgomery%202030%20Goal%20Setting.pdf

- Hospital Community Benefit Service Areas Report on Healthy Montgomery Core Measures, 2009-2017 https://www.montgomerycountymd.gov/healthymontgomery/Resources/Files/Reports/Hospital-CBSA-Report-2009-17_Final.pdf