



UNIVERSITY *of* MARYLAND  
BALTIMORE WASHINGTON  
MEDICAL CENTER

# COMMUNITY HEALTH NEEDS

**ASSESSMENT & IMPLEMENTATION PLAN**

EXECUTIVE SUMMARY | FISCAL YEARS 2023-2025

APPROVED BY THE UM BWMC BOARD OF DIRECTORS

COMMUNITY ENGAGEMENT COMMITTEE

MAY 24, 2022

APPROVED BY THE UM BWMC BOARD OF DIRECTORS

EXECUTIVE COMMITTEE

JUNE 20, 2022

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## **Executive Summary**

### **Overview**

The University of Maryland Baltimore Washington Medical Center (UM BWMC) is a private, non-profit acute care hospital that serves Anne Arundel County, largely the northern and western part of the county, including Brooklyn Park and Curtis Bay that cross over into Baltimore City. UM BWMC expert physicians and experienced, compassionate staff are connected to medical practices in the local community as well as the University of Maryland Medical Center in downtown Baltimore. For patients, this means access to high-quality care and research discoveries aimed at improving Maryland's health.

In FY2021, UM BWMC provided 18,244 admissions, 9,907 total surgeries, 127,961 outpatient visits, and 63,724 emergency department visits. The University of Maryland Baltimore Washington Medical Center is licensed for 285 acute care beds. Recognizing that the role of the hospital isn't simply to treat illness, UM BWMC also strengthens the communities we serve through outreach programs. By promoting healthier families and creating opportunities for people to improve their lives today, UM BWMC aims to impact the health of the community for many generations to come.

By combining education, screenings and support groups, UM BWMC provides programs for every member of the family. Free prenatal education classes and safe sleep kits, flu shot clinics and blood pressure screenings are just a few of UM BWMC's ongoing programs that promote wellness and meet the needs of those we serve. As the Coronavirus (COVID-19) pandemic encapsulated our communities, UM BWMC pivoted and began supporting the community by expanding COVID-19 testing, COVID-19 PPE distribution and COVID-19 safety information, mobile COVID-19 vaccinations, food distributions, and ongoing COVID-19 health information. In addition, UM BWMC provides a community outreach page on the UM BWMC public website to announce upcoming community health events and activities in addition to annual Community Benefit reporting and triennial Community Health Needs Assessment (CHNA). <https://www.umms.org/bwmc/community>.

### **Our Mission**

The mission of the University of Maryland Baltimore Washington Medical Center is to provide the highest quality health care services to the communities we serve.

### **Our Vision**

To be the health care provider of choice by delivering nationally recognized quality and personalized service through outstanding team members.

SOURCE: <https://www.umms.org/bwmc/about/mission>

## Our Values

**Communication:** We use proactive, timely and clear communication to support teamwork and exceptional patient care.

**Accountability:** We act with integrity and demonstrate ownership to provide great service, care and a healthy work environment.

**Respect:** We are respectful and show dignity to our patients, their families and each other.

**Excellence:** We provide compassionate and empathetic care, service and support.



## Community Health Needs Assessment (CHNA)

The Anne Arundel County Community Health Needs Assessment (CHNA) was conducted with leadership from UM BWMC, Luminis Health Anne Arundel Medical Center, Anne Arundel County Department of Health, Anne Arundel County Mental Health Agency, Inc., Community Foundation of Anne Arundel County, and Anne Arundel County Partnership for Children, Youth and Families.

Using both quantitative and qualitative data collection methods, the CHNA was designed to be as comprehensive as feasible to help frame informed decisions about community health needs and trends in Anne Arundel County in order to plan, implement and evaluate actions to address those needs. The CHNA is intended to be used by hospitals, health care providers, social service organizations, government agencies, community organizations, businesses, county residents and other key stakeholders.

### Community Benefit Service Area

The communities surrounding UM BWMC are some of the most vulnerable, high-risk residents in Anne Arundel County based on socioeconomic, health care utilization and health data. UM BWMC makes a concerted effort to reach vulnerable, at-risk populations, including the uninsured, racial/ethnic minorities, persons with risky health behaviors (e.g. smoking), and people with chronic health conditions (e.g. diabetes, cancer).

For the purposes of the FY22-24 CHNA, UM BWMC has identified the zip codes in figure 1 as the zip codes with the most vulnerable residents and where a majority of our health impact efforts will be focused.

**Figure 1. Community Benefit Health Impact Zip Codes**

21060 – Glen Burnie
21061 – Glen Burnie
21122 – Pasadena
21144 – Severn
21225 – Brooklyn Park

**Summary of Key Findings**

After analysis of all quantitative and qualitative data described in the CHNA summary in the following sections, the internal UM BWMC Community Benefit Implementation Planning Community convened in March 2022 to discuss the CHNA results and to identify and approve five strategic priorities to lead the UM BWMC Community Health Needs Implementation Plan. These priorities are also in alignment with the Maryland Statewide Integrated Health Improvement Strategy (SIHIS). The process resulted in the following priority areas being chosen, with a concerted effort being placed on implementing strategies throughout each priority area to reduce social determinates of health and increase health equity.

- Chronic Conditions
- Mental and Behavioral Wellness
- Maternal and Child Health
- Safe and Healthy Social Environments
- Health Care Access and Utilization

**County-Wide CHNA Findings**

**Population Demographics**

The most recent census estimates on the diversity of the county illustrates an increasing African American and Hispanic population at 25.3 percent and 72.6 percent respectively, and a diminishing White population with a -5.5 percent change since the last full U.S. Census in 2010.

**Figure 2. U.S. Census Demographics: Anne Arundel County, MD**

<b>Population Demographics</b>	
Population estimate, 2020	588,261
Population estimate, 2010	537,656
Population, percent change - 2010 to 2020	9.4%
<b>Age and Sex</b>	
Persons under 5, percent	6.1%
Persons under 18, percent	22.3%
Persons 65 years and over, percent	14.8%
Female persons, percent	49.4%

<b>Race and Hispanic Origin</b>	
White alone, percent	62.5%
Black or African American alone, percent	17.4%
Asian alone, percent	4.3%
American Indian and Alaska Native alone, percent	0.2%
Native Hawaiian and other Pacific Islander alone, percent	0.1%
Other race alone, percent	0.5%
Two or More Races, percent	5.3%
Hispanic or Latino, percent	9.7%

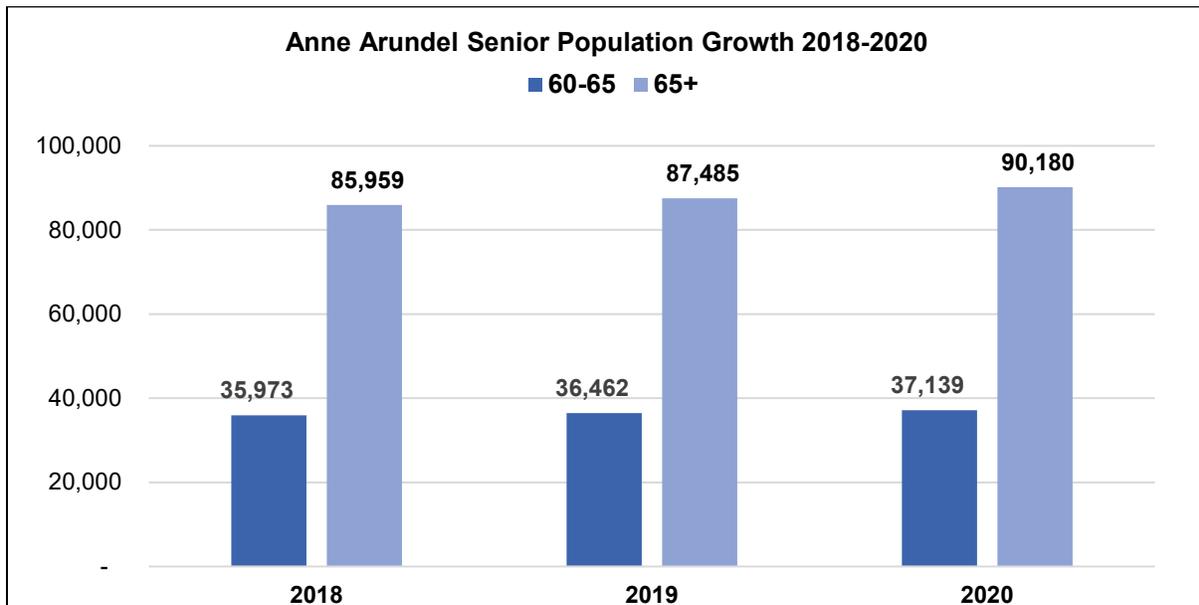
SOURCE: U.S. Census Bureau, 2020 Decennial Census, Table P2, Race and Ethnicity, <https://data.census.gov/cedsci/table?g=0500000US24003&tid=DECENNIALPL2020.P2>

SOURCE: U.S. Census Bureau, Anne Arundel County Profile, <https://data.census.gov/cedsci/profile?g=0500000US24003>

### Senior Population

The population of Anne Arundel County continues to age, and as of 2020, nearly 15 percent of the population was age 65 and older. This is a 2 percent increase since the last needs assessment was completed. The Maryland Department of Aging is tracking the 60 and older population and expecting the percentage to continue to increase through 2045, with an expected rise over 27 percent. With the rise in the senior population, the impact on county services, support, resource allocation, and health care use will also continue to rise.

**Figure 3. U.S. Anne Arundel County Senior Population Growth, 2018-220**



SOURCE: Maryland Department of Aging, 2021

### Poverty

Although the median household income stands at \$101,147, there continues to be a gap between rich and poor communities in the county, and the rate at which households are earning income. The percentage of households earning between \$50,000 and \$99,999 remained relatively unchanged between 2016 and 2019, while the percentage of households with an income below \$50,000 has lessened. It is noteworthy that there

has been a significant decrease in households earning below \$25,000 and a sizeable increase in earning \$200,000 or more since the previous CHNA.

**Figure 4. Anne Arundel County Estimated Household Income**

<b>Estimated Annual Household Income, 2016 vs 2019</b>		
	<b>2016</b>	<b>2019</b>
<b>Total Households</b>	204,829	216,200
Median Income	\$91,918	\$101,147
Less than \$25,000	10.0%	7.4%
\$25,000-\$34,999	5.3%	4.8%
\$35,000-\$49,999	9.2%	6.6%
\$50,000-\$74,999	15.9%	15.9%
\$75,000-\$99,999	14.2%	14.3%
\$100,000-\$199,999	33.5%	34.6%
\$200,000 or more	11.9%	16.5%

SOURCE: 2016: ACS 5-year estimate subject table vs 2019: ACS 1-year estimate subject table  
<https://data.census.gov/cedsci/table?q=anne%20arundel%20county&tid=ACSST1Y2019.S1901>

As established in the previous needs assessment, poverty rates are highest in the northern (near UM BWMC) and southern portions of the county. It is noteworthy to mention that there have been reductions in these percentages across a number of zip codes within this report. The zip codes in figure 5, centralized in the UM BWMC service area, have all seen reduced percentages since the last CHNA.

**Figure 5. Selected Poverty Percentages by Anne Arundel County Zip Code, 2019**

<b>Selected Anne Arundel County Poverty Zip Codes</b>			
<b>Zip Code</b>	<b>City</b>	<b>Poverty Percentage, 2019</b>	<b>Poverty Percentage, 2016</b>
21225	Brooklyn Park	24.8%	27.3%
21226	Curtis Bay	9.6%	16.6%
21060	Glen Burnie (East)	7.5%	7.9%
21061	Glen Burnie (West)	8.4%	9.2%

SOURCE: US Census American Community Survey 5 year estimates, 2015-2019; Maryland Health Services Cost Review Outpatient Files, 2019

## **Healthy and Safe Social Environments**

The social environments that residents live, work, learn and play can directly affect a person’s physical and mental health, and ability to feel secure and safe in day-to-day life. Repeated violence and exposure, economic stability, neighborhood environment, food security, and education can all reflect differences in the length and quality of a person’s life, rate of disease and illness, and access to treatment.

## **Social Determinants of Health**

Social determinants of health can impact individual and community health. Markers include race and ethnicity, employment status and income level, education, housing quality, neighborhood safety, family and social support, and a sense of community belonging. Many demographic and health indicators associated with poorer health

status and outcomes are found in the northern and southern portions of the county, and parts of Annapolis.

There have been positive strides made in the reduction of poverty numbers across Anne Arundel County and within zip codes inside the UM BWMC Service Area since the previous needs assessment was released. However, the northern part of the county that borders Baltimore City continues to have the largest number of residents living in poverty. The zip code of Brooklyn Park continues to have rising rates of poor health outcomes due to many social determinants of health, including lack of access to healthy foods.

**Figure 6. All Demographic, Socioeconomic, and Health Indicators by Zip Code in Anne Arundel County, 2019**

Zip Code	City	Poverty %	% without High School	% Households on SNAP	ED Visit Rate per 1,000	% Low Birth Weight Infants (2015-2019)	% Minority Population
20711	Lothian	9.4%	10.6%	9.8%	333.2	7.3%	32.4%
20724	Laurel	7.3%	8.9%	3.5%	250.0	8.6%	67.6%
20765	Galesville	23.6%	11.3%	25.5%	289.9	0.0%	45.7%
20776	Harwood	13.5%	13.0%	14.2%	311.8	5.8%	29.8%
21060	Glen Burnie (East)	7.5%	12.9%	9.2%	356.2	7.7%	33.4%
21061	Glen Burnie (East)	8.4%	11.8%	11.8%	404.4	8.9%	43.0%
21122	Pasadena	6.1%	7.8%	6.5%	255.2	8.2%	16.3%
21144	Severn	6.4%	6.0%	9.0%	279.9	8.7%	55.2%
21225	Brooklyn Park	24.8%	20.6%	29.3%	732.4	11.1%	60.9%
21226	Curtis Bay	9.6%	15.4%	12.3%	576.8	8.3%	27.6%
21401	Annapolis	8.1%	7.3%	7.5%	344.5	7.0%	30.1%
21403	Eastport	7.4%	9.2%	7.8%	308.1	7.9%	38.1%
	<b>Anne Arundel County</b>	<b>5.8%</b>	<b>7.9%</b>	<b>6.1%</b>	<b>310.3</b>	<b>7.7%</b>	<b>31.8%</b>

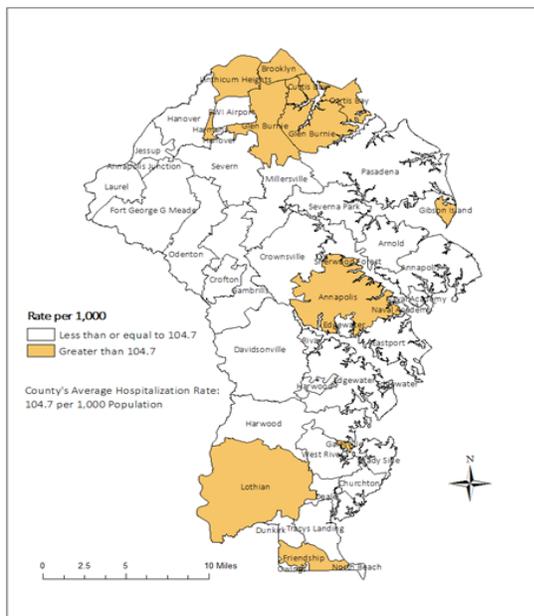
SOURCE: US Census American Community Survey 5 year estimates, 2015-2019; Maryland Health Services Cost Review Outpatient Files, 2019

\*Red Shading = Higher than County Average

\*Blue Shading = UM BWMC Service Area

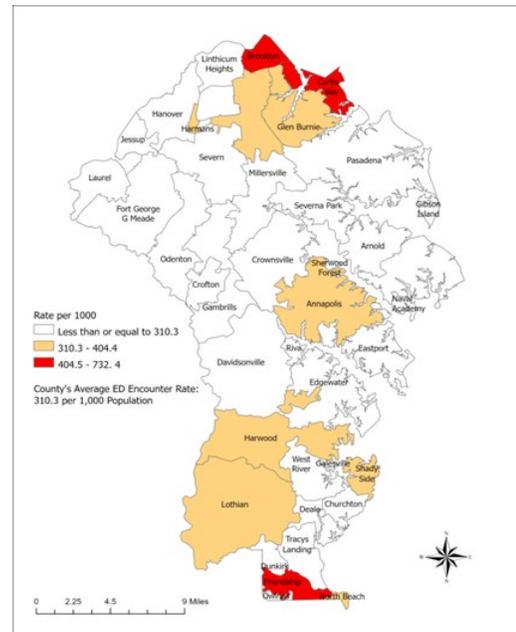
When patterns of hospitalizations and Emergency Department visits are examined by zip code, they generally reflect the social determinants illustrated above in figure 6. Zip code 21225 has the highest rate of hospitalization and emergency department visits in the county. Violence, lack of access to healthy foods, poorly controlled diabetes, substandard housing, and transportation were all noted throughout focus groups and informant interviews and potential reasons why hospital utilization rates are so high.

**Figure 7. Hospitalization Rate per 1,000 Population by Zip Code, Anne Arundel County, 2019**



Source: Health Services Cost Review Commission Outpatient, 2019

**Figure 8. Emergency Department Encounters per 1,000**



**Public Transportation**

There are a variety of needs concerning social determinants of health. There is lack of public transportation throughout Anne Arundel County, and operating bus routes have limited hours. This can be troubling for the county’s low-income and elderly residents. Limited transportation can affect a person’s ability to access health care services, educational options, and employment opportunities.

**Access to Healthy Food**

Food insecurity, or the lack of access to healthy food, directly impacts a person’s overall health. Those who are unable to afford healthy foods, or are struggling with the ability to get it due to geographic location or even lack of transportation, have a higher risk of chronic illnesses such as diabetes, heart disease, and obesity. Children who are hungry often have poorer educational outcomes and have more trouble focusing in the classroom.

One measure of food insecurity is the number of households receiving SNAP benefits. SNAP is the Supplemental Nutrition Assistance Program and is the largest federal nutrition assistance program. SNAP is available to low-income individuals and families, allowing them to purchase eligible food items in authorized retail stores. Figure 9 shows the inequities in food security when the number of household SNAP beneficiaries is broken down by race and ethnicity.

**Figure 9. Households on SNAP Benefits by Race/Ethnicity in Anne Arundel County, 2016-2019**

Households on SNAP Benefits by Race and Ethnicity, Anne Arundel County 2016-2019				
	2016	2017	2018	2019
White, NH	4.4%	4.6%	3.4%	3.3%
Black, NH	19.3%	12.0%	9.9%	19.3%
Asian, NH	8.9%	4.4%	4.8%	4.8%
Hispanic	18.8%	13.2%	10.6%	4.1%

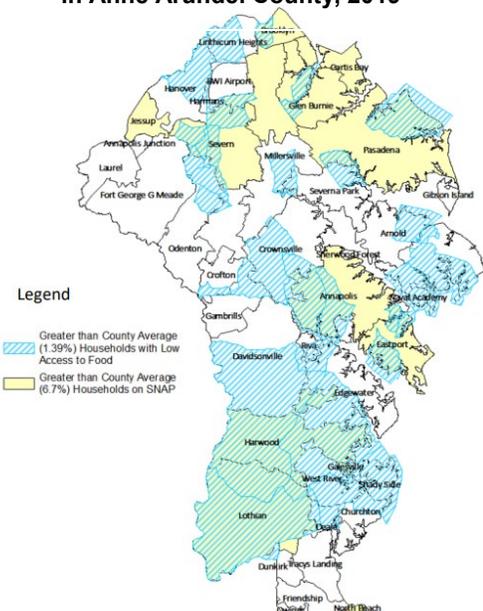
SOURCE: US Census Bureau, American Community Survey, 1-year Estimate 2017-2019

Another measure of food insecurity is how closely someone lives to a grocery store, if they have transportation to get to the store, and how healthy and affordable the options are. Anne Arundel County has over 74,000 residents in a food desert, which is defined by the United States Department of Agriculture (USDA) as urban neighborhoods and rural towns without ready access to fresh, healthy and affordable foods.

Typically, these areas are low-income zip codes where there is a lack of economic resources to travel for food, and other social determinants of health are rising. Figure 10 shows that those with the least access to fresh, healthy and affordable foods and are more likely to be receiving SNAP benefits are spread unevenly in the county. Altogether, there are 17 census tracts in the county that are considered food deserts including: Glen Burnie, Brooklyn Park, Linthicum Heights, Fort Meade and Severn.

Lack of access to healthy food causes many issues for county residents. According to America’s Health Rankings, 2021, food insecurity impacts the overall mental and physical health of an individual. Hungry children are also susceptible to poor health outcomes due to food insecurity. Children who are hungry are more likely to have cognitive and behavioral problems such as being anxious, and have overall lower test scores and academic performance.

**Figure 10. Access to Healthy Food in Anne Arundel County, 2019**



SOURCE: Anne Arundel County Health Department

## Education

Those with more education, on average, live longer and healthier lives than those who have less education. Residents with a higher education are more likely to obtain higher paying jobs that have health insurance, and have better working conditions. They also tend to face less financial stress by being able to utilize health insurance benefits and be less burdened by rising housing costs. Residents with less education and lower incomes tend to live in lower income neighborhoods having less recreational opportunities, higher crime rates, fewer jobs, and lower air and water quality all which affects the physical and mental health of a person. Areas with less education are mostly clustered in the northern part of the county and Annapolis (Anne Arundel County Health Department Health Report Card 2020).

## Employment

The Bureau of Labor Statistics (BLS) defines the labor force as individuals who are employed or unemployed, but actively looking for work in the past 4 weeks. Health insurance, paid sick leave, and paternal leave (e.g. maternity leave) are all shown to have positive health outcomes for employees and children. Inequities in education, gender, and racial and ethnic disparities can affect the type of work a person does. Nationally, African Americans are more likely to be unemployed or work in more blue collar service jobs compared to White counterparts, and work in jobs that put them at higher risk for injury and illness. These inequities can cause mental and physical health issues such as depression and anxiety, or workplace injuries.

Unemployment and underemployment, which an involuntary status of either part-time, poverty-wage, or insecure employment, are also on the rise. Underemployment could also be a social status where the income and job do not meet an employee's education or skill set (Healthy People 2020).

## Housing Instability

Housing instability may negatively affect an individual's physical health, making it harder to access health care. Although there is not a standard definition for housing instability, Healthy People 2020 considers this to include having trouble paying rent, overcrowding in a household, moving frequently, staying with family or friends, and spending the bulk of a household income on housing. This could also include homelessness, which encompasses not having a regular place to sleep at night, or having a primary residence as a shelter.

According to the Anne Arundel County Consolidated Plan 2021-2025, a county household paying more than 50 percent of their income on housing costs is considered to be severely burdened and is at great risk of losing their home or becoming homeless. In Anne Arundel County, this is about 17,603 households that earn \$50,000 or less per year. When compared to the affordable rental units available in the county, this leaves a large gap of almost 9,000 low and very low income households that are not able to be served by the current housing market.

While there are two housing authorities in the county, the Housing Authority of Anne Arundel County and City of Annapolis, there continues to be long waiting lists for vouchers with the average wait time of almost 20 months.

**Figure 11. Anne Arundel County Housing Choice Voucher List-2021**

<b>Anne Arundel County Housing Choice Voucher List, 2021</b>			
	<b># of Families</b>	<b>% of total families</b>	<b>Average Days Waiting</b>
Waiting list total	18,453		602
Extremely low income (<=30% but <=50% AMI*)	14,274	77.35%	
Very low income (>50% but 80% AMI*)	3,116	16.89%	
Low income (>50% but 80% AMI*)	617	3.34%	
Over limit for low income (>80% AMI*)	446	2.42%	
Families with Children	9,983	54.10%	
Elderly Families	664	3.60%	
Families with disabilities	4,134	22.40%	
White	3,177	17.22%	
African American	13,384	72.53%	
American Indian/Alaskan Native	123	0.67%	
Asian	186	1.01%	
Native Hawaiian/ Other Pacific Islander	68	0.37%	
Other	739	4.00%	
Not Assigned	776	421.00%	

SOURCE: Anne Arundel County Housing Commission, 2021

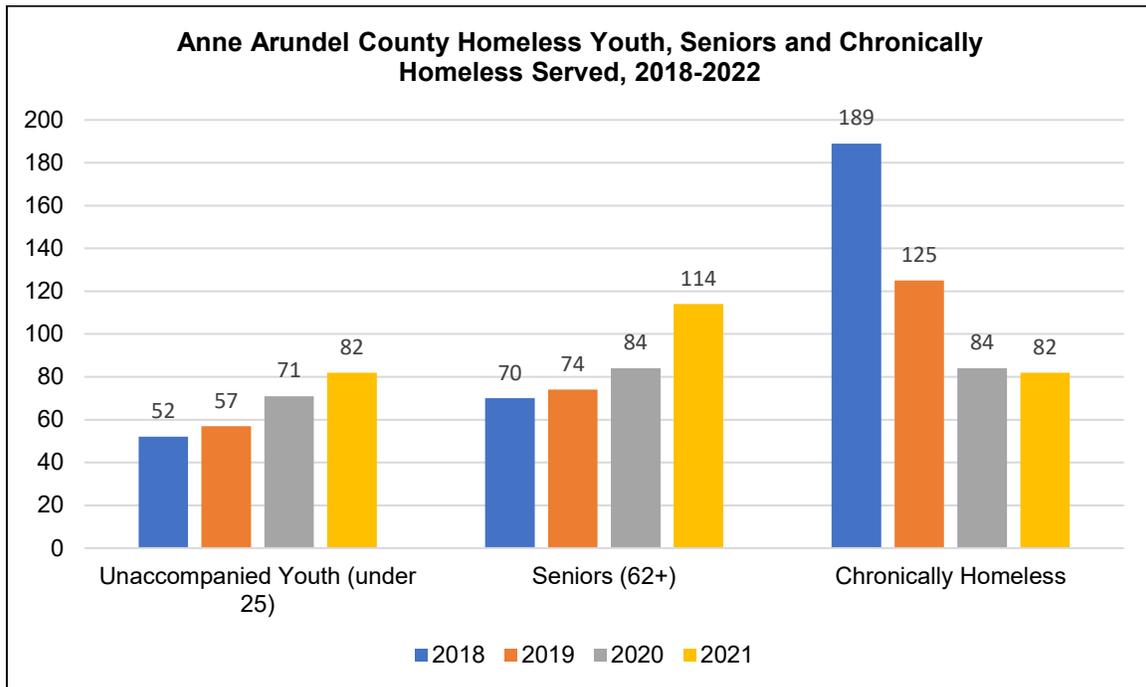
\*AMI is Area Median Income

Homelessness increases that risk of an individual having a chronic condition, earlier death than someone in stable housing, low birth weight and premature birth for individuals who are homeless and pregnant, and an increased risk of behavioral health issues such as substance abuse and depression.

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In Anne Arundel County, when the numbers from service providers, Anne Arundel County Public School System and Department of Social Services are merged, there are at least 850 homeless families in the county as of December 2021. As figure 12 depicts, we've seen the largest jump among seniors in the county since 2018 and the largest decline among chronically homeless individuals.

**Figure 12. Anne Arundel County Homeless Youth, Seniors and Chronically Homeless Served, 2018-2021**



Source: Anne Arundel County Department of Social Services, 2021

## Violence

Gun violence continues to be a concern for the county. While crime numbers remained relatively unchanged from 2018 to 2019, there was an increase in gun crimes in 2020.

Overall in Maryland, there was a 4.4 percent decrease in rapes being reported in Maryland from 2019 to 2020; in 2020 there were 1,891 rapes reported. Anne Arundel County Police Department tracks domestic and sexual assault data. Victims of interpersonal violence and sexual assault are referred to the hospital emergency departments for medical care. These residents are highly traumatized and require trauma-informed care.

The 50-mile radius surrounding the BWI airport is becoming known as an area in the nation for trafficking people due to being a passway between major US cities, and easy access to I-95.

The number of child protection investigations decreased in 2020; however, local experts believe that is due to the COVID-19 school closures and school staff being unable to act as the eyes and ears for the child welfare system. Teachers are often the first to spot an

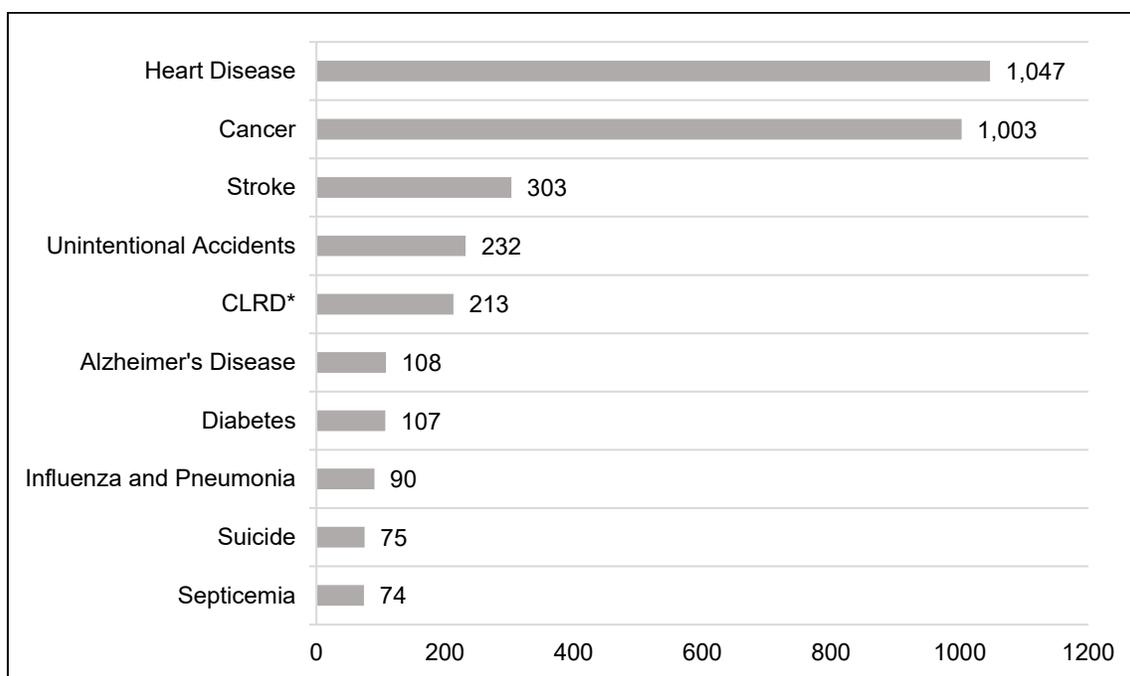
abused child. Overall in Maryland, the percentage of child sexual abuse is higher than the national average of 9 percent (mcasa.org).

## Health Indicators

### Leading Causes of Death

In 2019, there were 4,543 deaths in Anne Arundel County, and the life expectancy was 79.3 years. Heart disease is now the leading cause of death in the county, followed by cancer and stroke. Overweight and obesity continue to drive poor health outcomes for the county, including secondary issues such as diabetes, which remains in the top 10 leading causes of death.

**Figure 13. Leading Causes of Death in Anne Arundel County, 2019**



\*Chronic Lower Respiratory Diseases (CLRD) include both chronic obstructive pulmonary disease and asthma.

SOURCE: Maryland Vital Statistics Annual Report, 2019, Maryland Department of Health

### Chronic Health Conditions

Several chronic somatic health conditions were identified in the CHNA as community health needs including cardiovascular disease, cancer, diabetes and respiratory disease. Overweight and obesity are risk factors for many chronic conditions also identified as a community health problem.

UM BWMC has identified cardiovascular disease, cancer, diabetes, and respiratory disease as a particular concern to the UM BWMC service area. These diagnoses have a significant contribution to Emergency Department Utilization, hospital admissions, and hospital readmissions. Co-morbid chronic conditions are common in the hospital's patient population.

## Heart Disease

Heart Disease accounts for 23 percent or 1,047 of all county deaths as of 2019. This is a 1 percent increase since the previous CHNA was completed. When mortality rates are broken out by race and ethnicity, Figure 14 shows that heart disease impacts non-Hispanic and Hispanic groups in Anne Arundel County at the highest rate.

**Figure 14. Leading Causes of Death by Race/Ethnicity in Anne Arundel County, 2019**

White, NH	Black, NH	Hispanic	Asian, NH
Heart Disease 862 (23.4%)	Cancer 151 (22.9%)	Heart Disease 21 (22.1%)	Cancer 26 (26.3%)
Cancer 805 (21.9%)	Heart Disease 143 (21.7%)	Cancer 18 (18.9%)	Heart Disease 21 (21.2%)
Cerebrovascular Disease 243 (6.6%)	Cerebrovascular Disease 47 (7.1%)	Accidents 9 (9.5%)	Cerebrovascular Disease 9 (9.1%)
CLRD* 198 (5.4%)	Accidents 31 (4.7%)	Cerebrovascular Disease 4 (4.2%)	Diabetes 7 (7.1%)
Accidents 189 (5.1%)	Diabetes 24 (3.6%)	Influenza and Pneumonia 4 (4.2%)	Accidents 3 (3.0%)

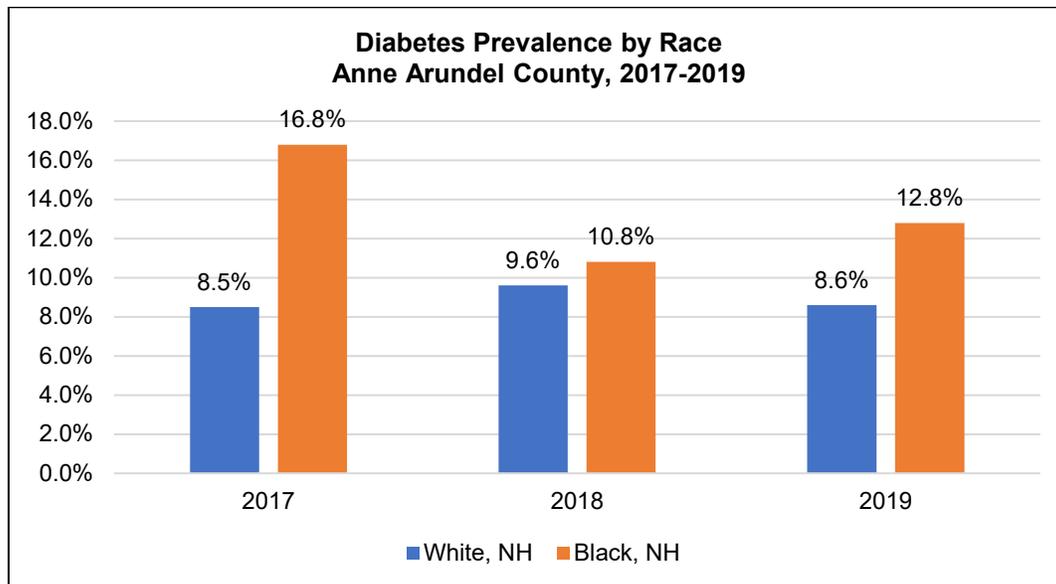
\*Chronic Lower Respiratory Diseases (CLRD) include both chronic obstructive pulmonary disease and asthma.  
SOURCE: 2020 Anne Arundel County Department of Health Report Card  
<https://www.aahealth.org/wp-content/uploads/2017/07/aahealthreportcard2021.pdf>

## Diabetes

In 2019, 10.4 percent of Anne Arundel County residents had Type 2 diabetes. Residents aged 65+ had the highest percentage of diabetes compared to those in younger age groups. Figure 15, shows the diabetes prevalence by race with non-Hispanic Black residents having a higher proportion of diabetes compared to non-Hispanic white residents, 12.8 percent and 8.6 percent respectively. The data in figure 15 is from the Maryland Behavioral Risk Factor Surveillance System, and the questions asked do not distinguish between Type 1 and Type 2 diabetes.

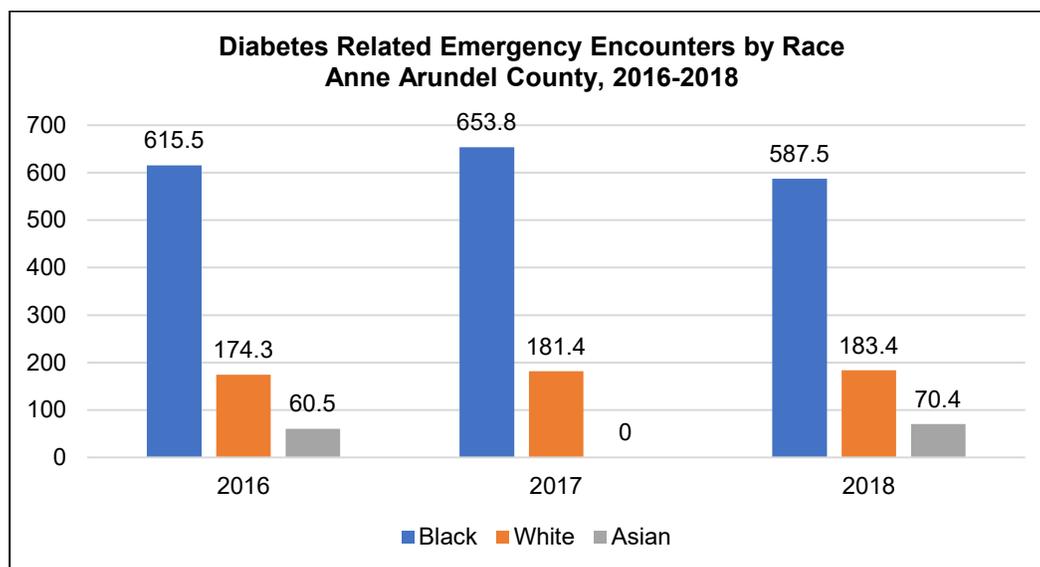
Emergency Department encounters are trending downwards from 2016 to 2019, but there continue to be disparities. African American residents are accessing emergency care for diabetes at almost four times the rate of White residents. This is depicted in figure 16. Individuals with diabetes are also hospitalized at a higher rate for additional health complications such as congestive heart failure. This could be for a variety of reasons such as not having a regular primary care doctor, lack of access to healthy foods, and cost of medications.

**Figure 15. Diabetes Prevalence by Race, Anne Arundel County, 2017-2019**



SOURCE: Maryland Behavioral Risk Factor Surveillance System, 2017-2019

**Figure 16. Diabetes-Related Emergency Department Encounters by Race, Anne Arundel County, 2016-2018**



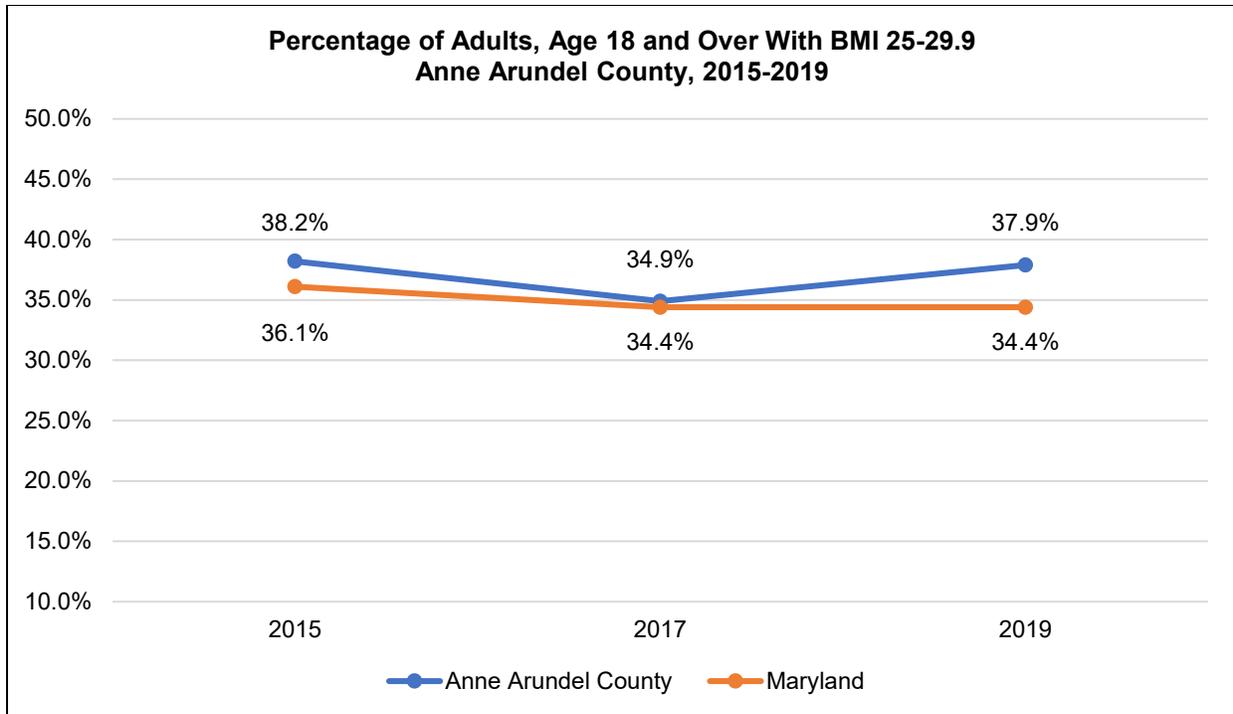
SOURCE: Maryland HSCRC Outpatient Files, 2015-2018

### Overweight and Obesity

Overweight and obesity are determined using weight and height to determine a Body Mass Index (BMI). Between 2017 and 2019 in Anne Arundel County, the percent of overweight adults, which is a BMI of 25 to 29.9, rose slightly from 34.9 percent to 37.9 percent, while the state average fell. The percentage of county residents who are classified as obese, which is having a BMI at 30 or over, also rose from 25.5 percent in 2015 to 30.5 percent, which is better than the state average of 32.2 percent. Many factors can play a role in weight and weight management including income level, lifestyle, surrounding environment, access to healthy foods, genetics and certain

diseases. The prevalence of obesity is high in low-income families in the county for a variety of reasons: their neighborhoods often lack full-service grocery stores and farmers' markets; healthy food can be more expensive; there is no transportation to get to a supermarket; there is greater availability of fast food restaurants selling cheap, filling food; and there are fewer recreational facilities for exercise. Streets may also be unsafe keeping people inside and more sedentary, or there are fewer physical activity options for children.

**Figure 17. Percentage of Adults Age 18 and Over Who Are Overweight in Anne Arundel County, 2015-2019**

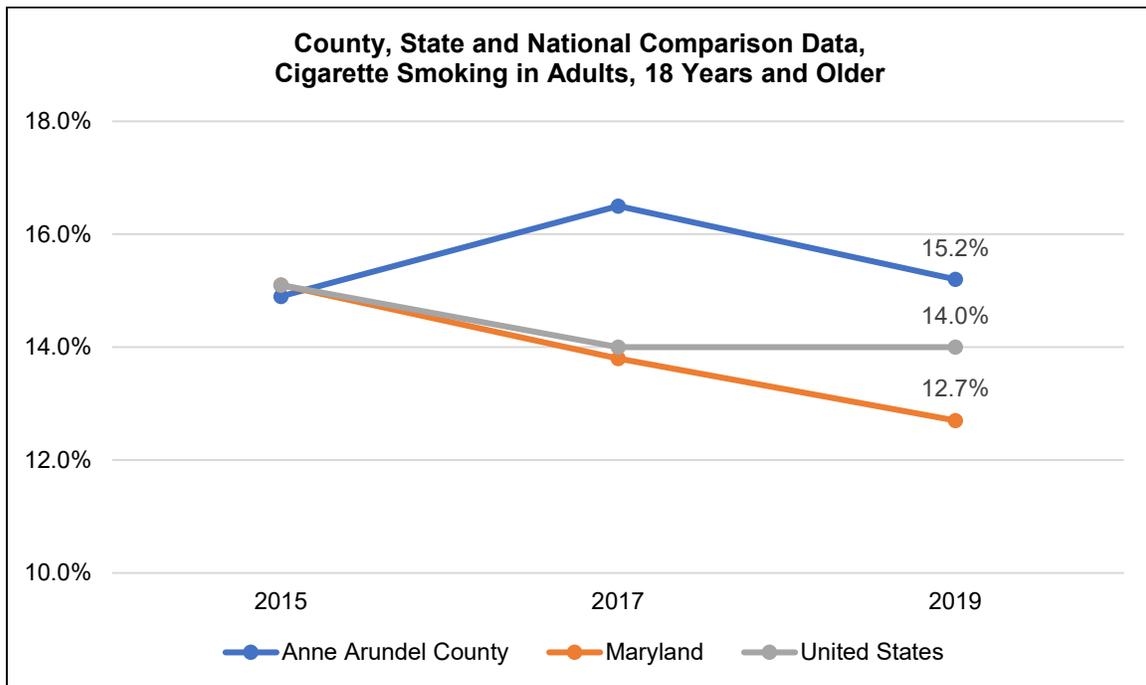


SOURCE: Behavioral Risk Factor Surveillance System (BRFSS), 2015-2019

### Smoking

Smoking is associated with an increased risk of heart disease, stroke, diabetes, lung and other types of cancers, and chronic lung diseases such as chronic obstructive pulmonary disease (COPD) (Centers for Disease Control, 2022). Figure 18 shows that while county, state and national comparisons for cigarette use show a decrease or stability in numbers, Anne Arundel County continues to have a higher rate of smoking.

**Figure 18. County, State and National Comparison of Cigarette Smoking in Adults Age 18 Years and Older**



Source: Maryland Department of Health, 2020

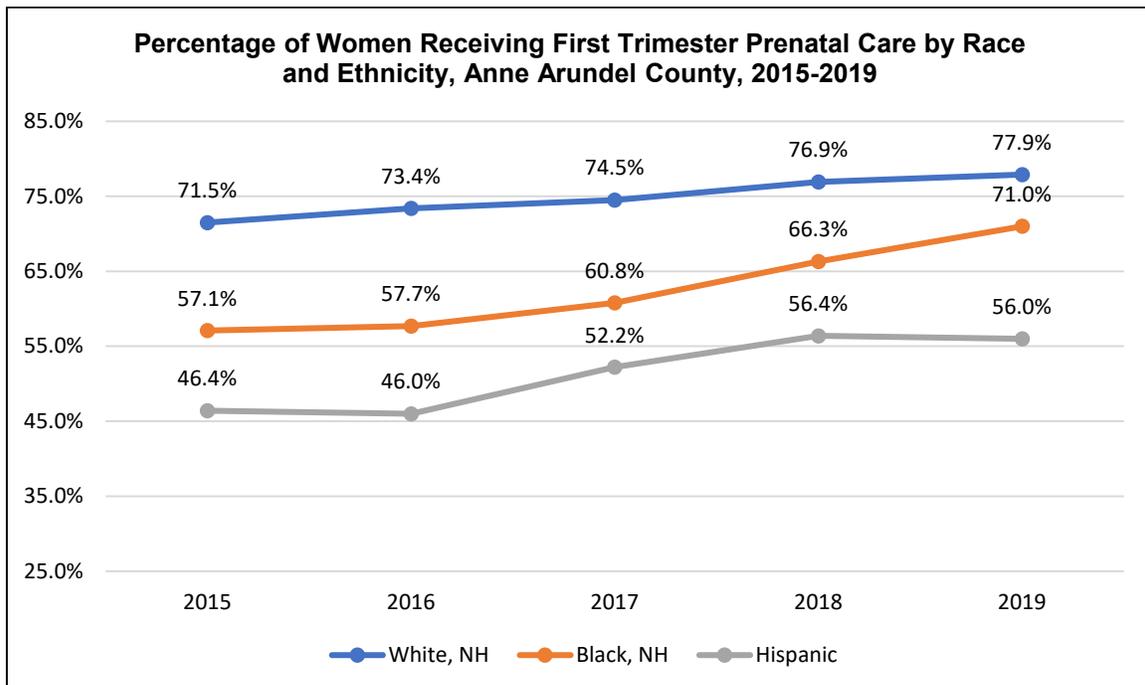
## Maternal and Child Health

The health of infants, children, and mothers is the base of good health and critical in the intergenerational cycle. The social determinants of health impact residents even before they are born; the mother’s pre-pregnancy health status, access to health care, and socioeconomic status are all factors that impact healthy babies. Severe maternal morbidity (SMM) is associated with high rates of preventability and disparities. In Maryland, African American mothers experience nearly twice the rate of SMM as compared to white mothers. In addition, the SMM rate for Asian Pacific Islander mothers and Hispanic mothers is nearly 1.4 times that of White mothers.

### Early Prenatal Care

Prenatal care is essential for positive birth outcomes including the risk of pregnancy complications, such as hypertension and diabetes. Prenatal care also reduces the risk of complications for the child. Babies of mothers who do not get prenatal care are three times more likely to have low birth weight and five times more likely to die than those babies born to mothers who do get care. According to the Maryland Department of Health (2019) and as shown in figure 19 with the first trimester prenatal care, White women have the highest percentage of prenatal care (77%), followed by African American women (71%) and Hispanic women (56%). For both White and African American women, first trimester prenatal care has increased over time since 2015.

**Figure 19. Percentage of Women Receiving First Trimester Prenatal Care in Anne Arundel County, 2015-2019**

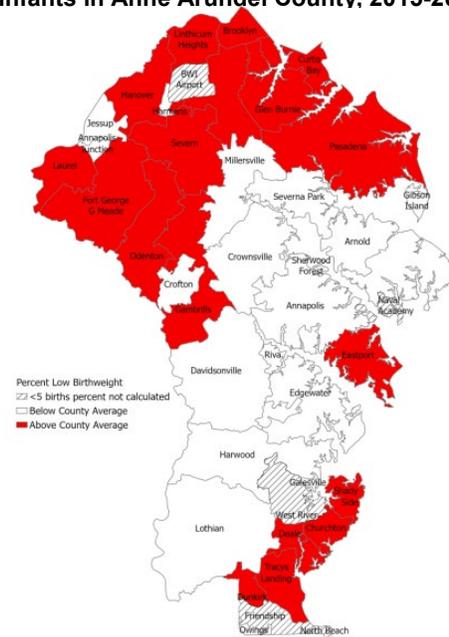


SOURCE: Maryland Department of Health, Vital Statistics Administration, 2015-2019 Annual Reports, US Department of Health and Human Services Healthy People 2020

### Low Birth Weight

Low birth weight (less than 2,500 grams) is the single most important factor affecting neonatal mortality (newborn infants up to 28 days old) and a significant determinant of post neonatal mortality (newborn infant between 28 and 364 days old). Low birth weight infants run the risk of developing health issues ranging from respiratory disorders to neurodevelopment disabilities. In Anne Arundel County, the percentage of low birth weight births remain relatively unchanged since the last needs assessment, yet still significantly higher among Black infants (11.3%) compared to White and Hispanic infants (6.6% and 6.9%). Most notable, there are several zip codes concentrated in the northern part of the county where the percentage of low birth weight infants is higher than the overall county average, especially Brooklyn Park, Severn, Laurel, Glen Burnie (West), Hanover, Millersville, and Jessup. These zip codes also experience higher issues with social determinants of health.

**Figure 20. Percentage of Low Birth Weight Infants in Anne Arundel County, 2015-2019**



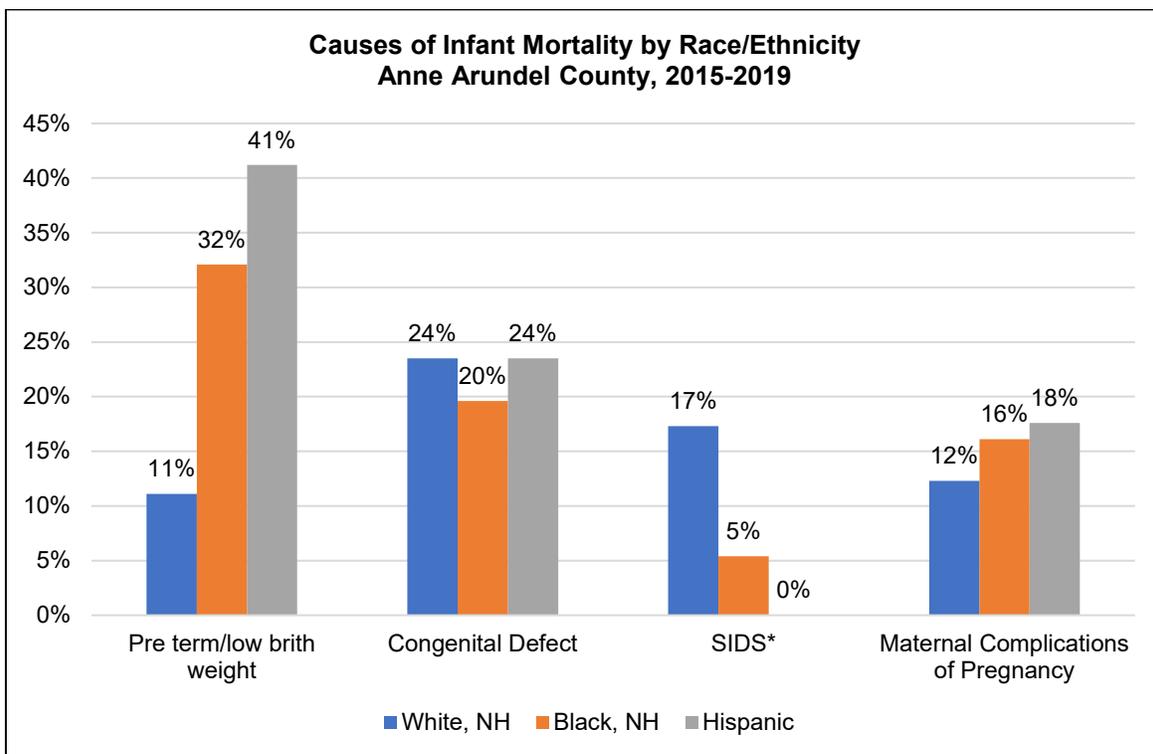
SOURCE: Anne Arundel County Department of Health

### Infant Deaths

Infant mortality measures deaths during the first year of life. Of all races and ethnicities, the infant mortality rate among non-Hispanic Black infants has been increasing since

2017. The current rate is almost four times the rate of non-Hispanic white infants. Overall in the county, the top cause of infant mortality includes preterm/low birth weight and congenital abnormalities. As stated above, the northern portion of the county is also at a higher risk of infant mortality due to the higher than county average of low birth weight births. It is important to note that the causes of infant deaths varied by race and ethnicity in the county.

**Figure 21. Infant Mortality Percentages by Race and Ethnicity in Anne Arundel County, 2015-2019**



SOURCE: <https://www.aahealth.org/wp-content/uploads/2017/07/infant-health-report-june-2021.pdf>

### Childhood Asthma

Asthma is responsible for more emergency department visits than some other major chronic conditions, and in Maryland asthma causes children to miss on average 2.3 more days of school per year. Disparities also occur when rates are broken down by race, with higher proportions of Black pediatric patients visiting the emergency department for asthma management.

### **Behavioral Health and Substance Abuse**

The rise in behavioral health issues for every age group, and the lack of appropriate service providers (e.g. psychiatrists, crisis beds, residential services), were the major concerns for participants in the needs assessment. These issues are exacerbated by providers who don't accept Medicaid and Medicare, and patients with inadequate health insurance, or no insurance at all.

The county has an overall shortage of mental health therapists, an issue exacerbated by the current labor shortages caused by COVID-19. The county has 1,180 mental health providers. The lack of providers is creating waiting lists throughout the county and increasing the number of referrals to emergency rooms.

### Emergency Department Utilization

According to the most recent annual data for the Health Services Cost Review Commission, Anne Arundel County emergency rooms saw over 11,000 patients for behavioral health issues. This number is, however, a reduction from 12,446 visits in the previous CHNA. The top categories were mood disorders, alcohol-related disorders and substance abuse disorders (figure 22).

**Figure 22. Emergency Department Encounters for Mental Health Conditions in Anne Arundel County, 2019**

<b>Emergency Department Encounters for Mental Health Conditions, Anne Arundel County, 2019</b>		
<b>Condition</b>	<b>Frequency</b>	<b>Percent</b>
Mood Disorder	2,945	26.7%
Alcohol Related Disorders	2,501	22.7%
Substance Related Disorders	2,131	19.3%
Anxiety Disorders	1,402	12.7%
Schizophrenia and Other Psychotic Disorders	642	5.8%
Suicide and Intentional Self-Inflicted Injuries	619	5.6%
Adjustment Disorders	351	3.2%
Delirium Disorders and Amnestic and Other Cognitive Disorders	248	2.3%
Attention-Deficit Conduct and Disruptive Behavior Disorder	151	1.4%
Miscellaneous Health Disorders	23	.02%

SOURCE: Health Services Cost Review Commission, Outpatient Files, 2019

### Opioid Overdoses

Since the early 2010s, illicit opioids such as heroin and, increasingly fentanyl and related synthetic opioids, have caused a growing share of drug overdose deaths, particularly among young adult males. Local (county) economic hardship is a significant factor in those deaths. As evidence in figure 23, zip codes with higher poverty rates tend to have higher overdose deaths.

**Figure 23. Overdose Deaths in Anne Arundel County by Zip Code, 2020**

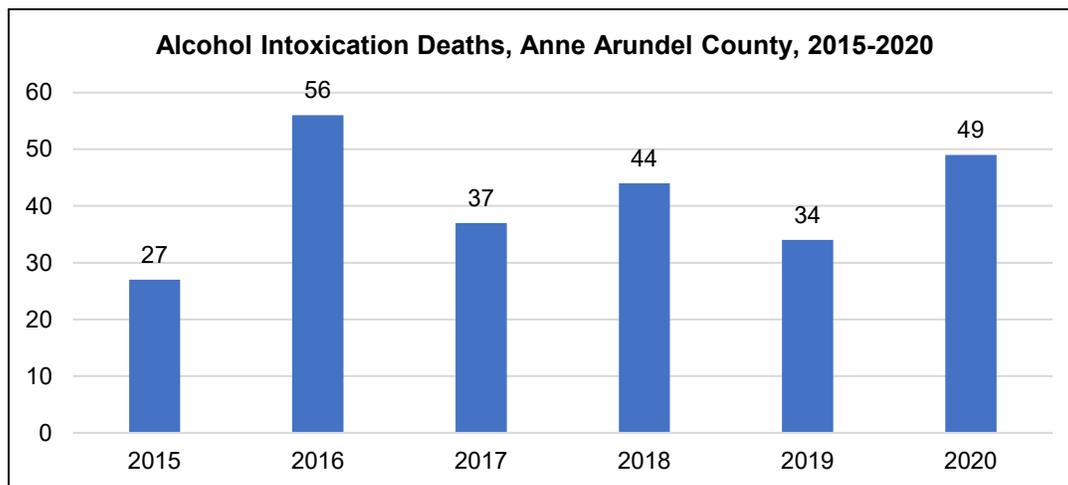
Overdose Deaths by Zip Code, 2020		
Zip Code	# Deaths	Percent
21061 - Glen Burnie	33	17.28%
21122 - Pasadena	27	14.14%
21403 - Eastport	25	13.09%
21225 - Brooklyn Park	25	13.09%
21060 - Glen Burnie	23	12.04%
21401 - Annapolis	21	10.99%
21090 - Linthicum	10	5.24%
21113 - Odenton	10	5.24%
21144 - Severn	9	4.71%
21146 - Severna Park	8	4.19%

SOURCE: Anne Arundel County Department of Health, 2020

### Alcohol Use

Since 2012, county needs assessments have pointed to the “social norm” of alcohol use in the county, with participants in the needs assessment pointing out that drinking alcohol became even more acceptable during the COVID-19 pandemic. As depicted in figure 24, alcohol-related deaths have risen since 2017, and are almost to the same level that they were in 2016 according to the Maryland Department of Health data.

**Figure 24. Alcohol Intoxication Deaths, Anne Arundel County, 2015-2020**



SOURCE: Maryland Department of Health, Unintentional Drug and Alcohol-Related Intoxication Deaths Report, 2020

### Early Childhood and School-Aged Youth

Every school in the Anne Arundel County Public School System now has Expanded School-Based Mental Health (ESBMH) services. Students enrolled in Medicaid can receive mental health services at their school during the school day. AACPS served 2,224 students during the 2020-21 school year. Overall, ADHD (27.56%) and anxiety

(27.02%) are the most frequent primary diagnosis for ESBMH students. However, there continues to be long waiting lists for school-based mental health services.

The percent change in the number of calls to the children's Anne Arundel County Crisis Response Warmline is another indicator of the rising mental health issues of children, having increased by 48 percent from 2019 (1,811) to 2020 (2,672).

There is not accessible data related to behavioral issues in the 0-5 population; however, community experts were concerned with behavioral issues in programs like Head Start, and commented on the increases in biting and hitting. The county does not currently have a home visiting program for this age group.

### **Health Care Access**

Anne Arundel County is served by two major hospitals: University of Maryland Baltimore Washington Medical Center (UM BWMC) in Glen Burnie and Luminis Health Anne Arundel Medical Center (AAMC) in Annapolis. UM BWMC is a member hospital of the University of Maryland Medical System, one of two academic medical systems in the state, which offers advantages to patients requiring highly-specialized tertiary care. MedStar Harbor Hospital, which is located just north of the county line in Baltimore City, also serves county residents.

There are three Federally Qualified Health Centers (FQHCs) that serve county residents: Chase Brexton Health Care (Glen Burnie), Total Health Care (Odenton), and Owensville Primary Care (South County). All of which may be difficult to get to while accessing public transportation. Chase Brexton Health Care is located across the street from the main UM BWMC hospital campus and a formal partnership has been established to increase services to patients in need. UM BWMC also collaborates with Total Health Care.

There are six Anne Arundel County Department of Health clinic sites. All FQHCs and health department sites offer services for both physical and behavioral health. Medicaid recipients, and other low-income or uninsured residents, can obtain mental health services through the Anne Arundel County Mental Health Agency, Inc. (AACMHA). Other health care services available in the county include primary care practices, outpatient specialty care, community clinics, urgent care facilities and retail store-based health clinics.

### **Financial Assistance and Medicaid Enrollment**

Many providers of health care offer financial assistance to persons of need. All hospitals have a financial assistance policy that provides medically necessary services to all people regardless of their ability to pay. Depending on their circumstances, patients can receive coverage for up to 100 percent of their medically necessary care. Payment plans are also available. FQHCs, community clinics and government providers offer services on a sliding scale or at no charge. Assistance with enrolling in publicly funded entitlement programs and health insurance plans through the state health benefit exchange are available from the hospitals, county health departments, social service

agencies and the Maryland Health Connection. However, it is important to note that not all health care providers, particularly behavioral health providers, accept all insurance plans or self-pay options.

The Affordable Care Act (ACA) continues to increase county residents' access to health care. In Maryland, persons whose income is below 138 percent of the poverty level are eligible for Medicaid. The number of residents enrolled in Medicaid continues to increase annually. Statistics from the Maryland Department of Health tracked an increase of over 14,000 residents from May 2019 to May 2021. The numbers rose from 83,167 to 97,543.

### Uninsured

The percent of uninsured residents in Anne Arundel County has declined steadily over time and hit 3.6 percent in 2019. Anne Arundel County continues to have a lower uninsured rate than the Maryland state rate that is almost 6 percent.

**Figure 25. Health Insurance Status in Anne Arundel County**

<b>Anne Arundel County Insurance Status, 2016 and 2019</b>		
	<b>2016</b>	<b>2019</b>
With Insurance Coverage	94.0%	96.4%
With Private Insurance	81.5%	84.2%
With Public Coverage	26.0%	27.0%
No Insurance Coverage	6.0%	3.6%

SOURCE: US Census ACS 1-year Estimates Data Profile, 2016 and 2019  
<https://data.census.gov/cedsci/table?g=0500000US24003&tid=ACSDP1Y2019.DP03>

Medicaid provides health care coverage to children under the age of 21. The Maryland Children's Health Program offers free or low-cost coverage to children under the age of 19 that are in households that do not meet the income requirement for Medicaid, but their household income is below certain income limits. The MCHIP does require a small monthly fee to enroll.

The Anne Arundel County Health Department and the Anne Arundel County Medical Society have partnered with local doctors and health care providers to offer low-cost health services through the REACH Program. The Residents Access to a Coalition of Health is available to adult, Anne Arundel County residents who are not eligible for programs like Medicaid, Medicare, and health care plans through the MD Health Connection. This is not a form of health insurance, but is a program where a patient will pay the provider at the time of service, utilizing a sliding fee scale based on household income.

### Health Care Provider Access

Access to primary care physicians, dentists, and mental health services are demonstrated needs within the county. Having a primary care provider reduces nonfinancial barriers to obtaining care, facilitates access to services, and increases the

frequency of contacts with health care providers. Without a primary care provider, people have difficulty obtaining prescriptions and attending necessary appointments to control chronic health conditions, or delay preventative care and health screenings.

**Figure 26. Primary Care Physicians and Dentists in Anne Arundel County, 2021**

Primary Care Physicians and Dentists in Anne Arundel County			
	Anne Arundel County Ratio	Maryland Ratio	Top US Counties Ratio
Primary Care Physicians (2018)	1,470:1	1,130:1	1,030:1
Dentists (2019)	1,440:1	1,260:1	1,210:1

SOURCE: County Health Rankings, 2021 <https://www.countyhealthrankings.org/app/maryland/2021/rankings/anne-arundel/county/outcomes/overall/snapshot>

In 2019, 77.2 percent of county residents reported having a routine annual exam with their doctor, while almost 9 percent of residents reported that they were unable to see a doctor in the past year because they could not afford the cost. Additionally, 84.9 percent of residents reported having at least one personal doctor that they routinely see.

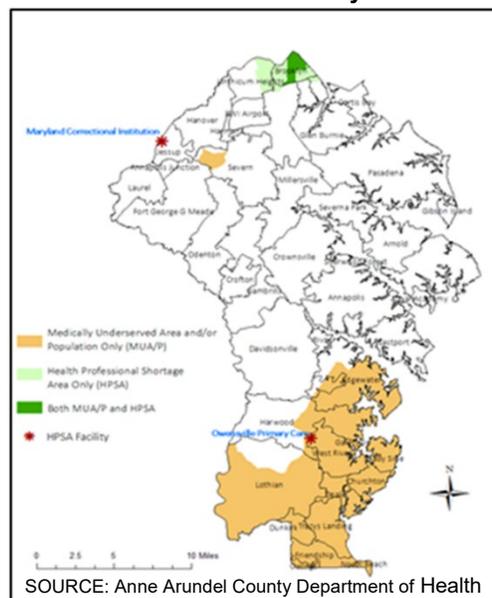
### Health Professional Shortage Areas

Health Professional Shortage Areas (HPSAs) are designed by the Health Resources and Service Administration (HRSA) as having a shortage of primary medical care, dental, or mental health providers and may be geographically or facility-based.

### Medically Underserved Areas

Medically Underserved Areas (MUAs) are designated based on four variables: ratio of primary care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level and percentage of the population age 65 or over. There are 11 census tracts in Anne Arundel County designated as a MUA. Approximately 10 percent of the county's population lives in these 11 census tracts. Zip code 21225, Brooklyn Park in North County is both a HPSA and an MUA.

**Figure 27. Health Professional Shortage Areas in Anne Arundel County**



### Emergency Department and Hospital Utilization

In 2019, there were 55,671 hospital stays in Anne Arundel County, a rate of 96.1 per 1,000. The hospitalization rate increases with age, with persons age 65 and older accounting for 35 percent of inpatient hospitalizations. Figure 28 shows the demographic breakout for the county. It is notable that the rates have decreased in every category since the last needs assessment; however, the rate of inpatient hospitalizations by Black county residents continues to outpace other races. Note: This

data only includes Anne Arundel County residents who were admitted to hospitals in Maryland.

**Figure 28. Inpatient Hospitalizations in Anne Arundel County, 2019**

<b>Inpatient Hospitalizations Anne Arundel County 2019</b>		
	<b>Number</b>	<b>Rate per 1,000</b>
<b>Total Hospitalizations</b>	55,671	96.1
<b>Age</b>		
0 to 18 Years	9,332	68.5
19 to 39 Years	11,677	71.7
40 to 64 Years	14,922	77.2
65 Years and Over	19,740	227.3
<b>Sex</b>		
Male	23,957	83.6
Female	31,714	108.3
<b>Race/Ethnicity</b>		
White, NH	35,510	92.5
Black, NH	11,442	112.3
Asian, NH	1,274	58.9
Hispanic, any race	3,665	75.1

SOURCE: Health Services Cost Review Commission, 2019 Inpatient Files

The rate also changes depending on zip code. The zip code containing Brooklyn Park continues to see a high rate of hospitalizations at 143.6 per 1,000, although this is a reduction since the previous needs assessment was completed. All zip codes in figure 29 are also areas where both access to care and rising social determinants of health are notable.

**Figure 29. Inpatient Hospitalizations by Zip Code in Anne Arundel County, 2019**

<b>Inpatient Hospitalizations by Zip Code in Anne Arundel County 2019</b>			
<b>Zip Code</b>	<b>Location</b>	<b>Number</b>	<b>Rate per 1,000</b>
20758	Friendship	74	164.1
21077	Galesville	41	148.6
21225	Brooklyn Park	4,934	143.6
21226	Curtis Bay	896	143.4
21060	Glen Burnie (East)	4,052	116.1
21061	Glen Burnie (West)	6,244	115.9

SOURCE: Health Services Cost Review Commission, 2019 Inpatient Files

## Selecting Priorities

### Approach

UM BWMC took a multi-pronged approach to prioritizing our local community health needs. This approach helped to assure that our community benefit implementation plan addressed the most significant needs identified in the CHNA while also being aligned with national, state and local public health priorities. This method was also developed

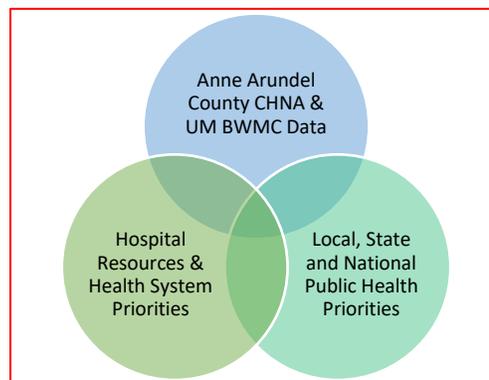


Figure 30: Approach to Selecting CHNA Priorities

to be responsive to Maryland's health system transformation, including the increased focus on population health and community partnerships. This approach additionally helps to assure that UM BWMC has the necessary infrastructure and resources to successfully implement our Community Benefit Implementation Plan.

- Reviewed National and State Community Health Priorities and Implementation guidance from the following:
  - National Prevention Strategy Priorities
  - Statewide Integrated Health Improvement Strategy (SIHIS) Goals
  - Healthy Anne Arundel (Anne Arundel County Health Department)
- CHNA author, Pam Brown, reviewed and transcribed findings from informant interviews and focus groups. After review, UM BWMC, AAMC, Anne Arundel County Health Department, and Anne Arundel County Mental Health Agency discussed priority areas that would be universally worked on by all organizations. Social determinants of health and access to care will be intertwined throughout.
- Assembled a Community Benefit Implementation Planning Committee comprised of clinical and administrative leadership to guide priorities and implementation plan development.

### Results

After review of the National and State Public Health Priorities, we found the following to inform our CHNA.

- National Prevention Strategy Priorities
  - Tobacco-Free Living
  - Preventing Drug Abuse and Excessive Alcohol Use
  - Healthy Eating
  - Active Living
  - Injury and Violence-Free Living
  - Reproductive and Sexual Health
  - Mental and Emotional Well Being

- Statewide Integrated Health Improvement Strategy
  - Care Transformation Across the System: Improve care coordination for patients with chronic conditions
  - Diabetes: Reduce the mean Body Mass Index (BMI) for adult Maryland residents
  - Opioid Use Disorder: Improve overdose mortality
  - Maternal Child Health: Reduce severe maternal morbidity rate
  - Decrease asthma-related emergency department visit rates, ages 2-17
  
- Healthy Anne Arundel/Anne Arundel County Health Department
  - Healthy Eating and Active Living
  - Mental Wellness
  
- Informant and Focus Group Action Items
  - Mental Health: including substance abuse
  - Maternal and Child Health: including infant and maternal mortality
  - Heart Disease: including obesity
  - Diabetes: including food insecurity
  - Cancer
  
- Community Benefit Implementation Planning Committee (internal UM BWMC committee)
  - Chronic Conditions: including disease prevention and management
  - Mental and Behavioral Wellness: including adult and adolescent, and substance abuse
  - Maternal Health: including postpartum hypertension, early prenatal care and education
  - Child Health: including asthma, infant mortality (safe sleep)
  - Food Insecurity
  - Health Care Access
  - Workforce Development: including employment and career opportunities
  - Health Care Access: including care coordination, medication assistance
  - Safe and Healthy Social Environments: including violence, sexual assault

### **UM BWMC's Selected Community Benefit Priorities**

After analysis of all data described in the CHNA summary in the above sections, the UM BWMC Community Benefit Implementation Planning Community convened in March 2022 to discuss the CHNA results and to identify and approve five strategic priorities to lead the UM BWMC Community Health Needs Implementation Plan.

The process resulted in the following priority areas.

- Chronic Conditions
- Mental and Behavioral Wellness

- Maternal and Child Health
- Safe and Healthy Social Environments
- Health Care Access and Utilization

An overarching theme is the reduction of health disparities among vulnerable populations with a strong focus on social determinants of health.

The figure below illustrates the synergies between UM BWMC, local, state and national priorities.

**Figure 31. Alignment of UM BWMC Community Benefit Priorities with Public Health Priorities**

UM BWMC Community Health Priorities	Anne Arundel County Health Department Priorities	Maryland SIHIS Goals	National Prevention Strategy Priorities
Chronic Health Conditions (Cancer, Cardiovascular Disease, Diabetes, Obesity/Overweight)	Healthy Eating and Active Living	Diabetes; Decrease Asthma-Related ED visits	Active Living; Healthy Eating; Tobacco-Free Living
Mental and Behavioral Health	Mental Wellness	Opioid Use Disorder	Preventing Drug Abuse and Excessive Alcohol Use; Mental and Emotional Well-Being
Maternal and Child Health		Maternal Child Health, Maternal Morbidity; Decrease Asthma-Related ED Visits	Reproductive and Sexual Health
Health Care Access and Utilization		Care Transformation Across the System	
Safe and Healthy Social Environments			Injury and Violence-Free Living

Within these priority areas, a number of potential health improvement strategies have been identified, which are described in more detail starting on page 30. where the full community health needs implementation plan is presented. Some of the strategies are the continuation or expansion of existing community benefit activities. Existing programs will be enhanced and expanded through new partnerships to amplify the reach in the community, with an emphasis on reaching vulnerable populations. Other strategies are new initiatives that will be planned and implemented to address community needs.

The role UM BWMC will take in each implementation strategy will depend on a number of factors. Depending on the specific activity, UM BWMC will either take a leadership, collaborative, or supportive role. Below is how UM BWMC envisions offering support.

**Leadership:** UM BWMC will provide the leadership and devote the necessary resources to assure the success of the activity or initiative. Resources may include staff time and expertise, financial commitments, and in-kind contribution.

**Collaborate:** When serving in a partner role, UM BWMC will collaborate with other organizations to provide the leadership and/or resources necessary for the activity or initiative being presented.

**Support:** UM BWMC recognizes the contribution to health and importance to the community, but does not have the organizational strengths or available resources to take on a key leadership role. In these instances, UM BWMC will provide assistance as resources are available.

### **Unmet Community Needs**

Several additional topic areas were identified through talking with community members, public health experts, and through data analysis. UM BWMC will focus the majority of its efforts on the identified strategic priorities and will continue to review all of the needs identified in the CHNA for future work and partner collaboration. Although these unmet needs within the CHNA are not addressed by UM BWMC directly, they are still important to the health of the community and will continue to be addressed by government agencies and existing community-based organizations.

Lack of affordable dental services. UM BWMC does not provide routine dental care at this time, but we do refer patients to low-cost dental clinics for care. We subsidize oral surgery on-call services and have oral surgeons on our medical staff.

Environmental health concerns, such as Chesapeake Bay water quality and air quality. This is being directly addressed by the Anne Arundel County Department of Health's Bureau of Environmental Health Services and other local environmental advocacy organizations.

Public transportation. This is not in the scope of services that UM BWMC can provide as a hospital; however, we do provide some transportation assistance through our care management program and our Transitional Care Center. We also provide transportation for a select number of programs through our Community Health Department, such transportation assistance is provided for participants enrolled in our free prenatal education program and smoking cessation classes. Anne Arundel and county governments are collaborating to expand access to public transportation in the Central Maryland region.

Other needs identified in the CHNA include affordable housing and gun violence. UM BWMC will support these priorities through participation in local task forces, economic development initiatives, health profession trainings designed to improve socioeconomic well-being of individuals and the local community.

## **Documenting and Communicating Results**

The University of Maryland Baltimore Washington Medical Center Community Health Needs Assessment and Implementation Plan will be posted on the UM BWMC website under the Community webpage at <https://www.umms.org/bwmc/community>.

Highlights of this report will also be documented in the Community Benefits Annual Report for FY2023. Reports and data will be shared with our community partners and community leaders as we worked together to make a positive difference in our community by empowering and building healthier communities.

## Implementation Plans for FY 2022-2024

<b>Priority Area: Chronic Health Conditions (Cancer, Cardiovascular Disease, Diabetes, Overweight/Obesity)</b>			
<b>Goal: <i>Help community members prevent and manage chronic health conditions.</i></b>			
<u>Annual Objective</u>	<u>Strategy</u>	<u>Target Population</u>	<u>Metrics</u>
<p>Increase the proportion of adults who are a healthy weight</p> <p>Reduce the proportion of youth who are obese</p>	<p>Provide physical activity opportunities for youth and adults, encompassing all fitness levels</p> <p>Provide body composition screenings and education on BMI and healthy weight to adults, age 18 years and older</p> <p>Promote awareness and education on healthy foods and easy ways to prepare them to encourage healthy eating</p>	<p>Anne Arundel County, with an emphasis on those categorized with a BMI over 30</p>	<p>Number of participants who attend exercise class</p> <p>Number or people screened for BMI</p> <p>Decrease in overweight and obesity percentages (AACO measures)</p> <p>Number of education resources provided</p> <p>Number of attendees at nutrition classes and/or lectures</p>
<p>Increase diabetes awareness and healthy lifestyles to prevent and manage diabetes or other chronic conditions</p>	<p>Provide education classes and support groups for pre-diabetes and diabetes</p> <p>Provide education, information and resources to help adults better manage their health conditions</p>	<p>Anne Arundel County residents who currently have one or more chronic conditions, or are at risk for developing a chronic health condition</p>	<p>Number of attendees at classes and support groups</p> <p>Number of education resources provided</p> <p>Number of people screened with a pre-diabetes risk assessment</p>
<p>Reduce the mortality rate from heart disease and stroke</p>	<p>Provide blood pressure screening clinics and education on the importance of heart health, knowing your numbers, and decreasing sodium intake</p> <p>Provide free vascular screenings and related education</p>	<p>Anne Arundel County, with emphasis on residents who currently have heart disease or have had a stroke, or are at high risk</p>	<p>Number of people screened for hypertension and results</p> <p>Number of education resources provided</p> <p>Number of people who attended support groups</p>

	<p>Provide education and information on managing blood pressure and hypertension medications</p> <p>Provide support groups to help community members better manage their health conditions</p>		<p>Decline in hypertension related ED visits</p> <p>Decrease in heart disease mortality rates (AACO measures)</p>
<p>Increase the diagnostic rate of early stage cancer</p> <p>Increase cancer prevention education and awareness for early detection</p>	<p>Provide education to adults on updated/ current health screening guidelines</p> <p>Provide smoking cessation classes and related medical support</p> <p>Provide free and/or low-cost screenings for cancer awareness and prevention; referring to Anne Arundel County Cancer Screening Programs, where necessary</p> <p>Provide cancer support groups and survivorship programs</p>	<p>Anne Arundel County, adults 18 years and older</p>	<p>Number of persons screened and results</p> <p>Number of attendees at support groups and classes</p> <p>Number of referrals provided</p> <p>Number of education resources provided</p> <p>Decrease in percentage of adults who smoke (AACO measures)</p> <p>Decrease in cancer mortality rates (AACO measures)</p>

**Priority Area: Behavioral Health**

**Goal: *Help community members prevent and manage behavioral health conditions.***

<u>Annual Objective</u>	<u>Strategy</u>	<u>Target Population</u>	<u>Metrics</u>
Reduce the number of patients presenting in the Emergency Department for behavioral health conditions	<p>Provide education and information to community members on identifying signs, symptoms and resources in the community for mental and behavioral health conditions</p> <p>Provide a mental health support group</p>	Anne Arundel County	<p>Number of attendees at classes and events</p> <p>Number of education resources provided</p> <p>Number of attendees at support groups</p> <p>Decrease in ED visits for behavioral health conditions</p> <p>Number of patients enrolled in Partial Hospitalization Program (PHP)</p>
<p>Reduce the drug-induced death rate</p> <p>Increase early intervention for the treatment and management of substance use disorders</p>	<p>Provide education and information to community members on pain management alternatives</p> <p>Expand outreach and educational services for the prevention and management of opioid misuse, for youth and adults</p> <p>Provide education and information on identifying substance abuse in the community, and resources to respond</p>	Anne Arundel County	<p>Number of attendees at classes and events</p> <p>Number of education resources provided</p> <p>Number of patients screened through Screening, Brief Intervention, and Referral to Treatment (SBIRT)</p> <p>Number of patient referrals to services</p> <p>Decrease in drug-related overdoses and deaths (AACO measures)</p>
Increase partnerships and opportunities to expand mental	Promote education, information, and resources on adolescent	Anne Arundel County, emphasis on youth and young adults	Number of attendees at classes and events

<p>health resources and support to youth and their families</p> <p>Reduce the suicide rate in Anne Arundel County</p>	<p>mental health and adverse childhood experiences (ACEs)</p> <p>Provide education and resources on youth mental health, and information to parents/guardians on how to identify youth mental health needs</p>	<p>under the age of 25 years and those who work with this population. Emphasis on North and West Counties, and individuals of health disparities</p>	<p>Number of new partnerships</p> <p>Number of education resources provided</p> <p>Number of referrals provided</p> <p>Decrease in suicide deaths (AACO measures)</p>
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**Priority Area: Maternal and Child Health**

**Goal: *Improve pregnancy, birth and early childhood outcomes.***

<u>Annual Objective</u>	<u>Strategy</u>	<u>Target Population</u>	<u>Metrics</u>
Increase the proportion of pregnant women starting prenatal care in the first trimester	Provide education and information on the importance of early prenatal care to women of childbearing age	Anne Arundel County, focus on women of childbearing age in North and West Counties, and individuals of health disparities	Number of OB patients within UM BWMC OB/GYN practices  Number of attendees at childbirth education classes  Number of education resources provided
Increase the proportion of women who are identified as being pre-hypertensive or hypertensive during pregnancy to reduce maternal morbidity and mortality rates	Screen women for hypertension during prenatal care visits, labor, after delivery, and at postpartum visits  Provide education, information, and screening opportunities on hypertension and identifying concerns prior to the first postpartum visit	Women in Anne Arundel County, emphasis on individuals of health disparities	Number of women screened for hypertension  Number of education resources provided
Reduce the number of sleep related infant deaths in the county	Provide safe sleep awareness education to women during prenatal care visits and after delivery  Provide safe sleep education, sleep safety kits and pack and plays to women  Provide education and information on the importance of early prenatal care to women of childbearing age	Anne Arundel County families who have children under the age of two, and women of childbearing age in North and West Counties, and individuals of health disparities	Number of attendees at classes and events  Number of pack and plays distributed  Number of education resources provided  Decrease in infant mortality (AACO measures)  Decrease in low birth rate infants (AACO measures)

<p>Increase support to parents and/or guardians of young children</p>	<p>Provide new parent and breastfeeding support</p> <p>Provide education opportunities for parents and guardians to positively manage stress, discipline, basic healthcare information for themselves and child(ren), obtaining additional federal, state, and county resources such as WIC and MCHP and additional social care resources needed</p>	<p>Anne Arundel County families who have children ages 0-5</p>	<p>Number of attendees at classes and support groups</p> <p>Number of education sessions offered</p> <p>Number of education resources provided</p> <p>Number of referrals to county, state, federal programs</p>
<p>Increase asthma awareness and education</p> <p>Reduce the number of asthma-related hospitalizations and Emergency Department visits</p>	<p>Provide awareness, education, and resources to AACPS nurses and AACPS families</p> <p>Identify high-risk children through pediatric practice(s) and provide additional education and resources, including medication assistance</p>	<p>Anne Arundel County families with children, with an emphasis on individuals with health disparities</p>	<p>Number of education resources provided</p> <p>Decrease in asthma related ED visits</p>

**Priority Area: Health Care Access**

**Goal: *Help community members obtain health care resources and support to prevent and manage health conditions, including helping eligible patients obtain financial assistance for health care services.***

<u>Annual Objective</u>	<u>Strategy</u>	<u>Target Population</u>	<u>Metrics</u>
<p>Increase the number of community members being screened for preventative health conditions</p> <p>Increase the number of community members accessing preventative health care services</p>	<p>Provide access to free/low cost preventative health screenings (e.g. blood pressure, vascular, cancer)</p> <p>Provide access to free influenza and COVID-19 vaccines</p> <p>Provide referrals to community resources for follow-up care as needed</p> <p>Provide information on the Anne Arundel County free/reduced fee dental, and cervical and breast cancer screening program</p>	<p>Anne Arundel County, emphasis on North and West Counties, and individuals of health disparities</p>	<p>Number of people screened at screening events</p> <p>Number of people vaccinated for influenza</p> <p>Number of people vaccinated for COVID-19</p> <p>Number of referrals provided</p> <p>Number of education resources provided</p>
<p>Increase community awareness on accessing and understanding health care benefits</p>	<p>Maintain and provide resources for applying for Medicaid and Medicare, and the Maryland Health Connection</p> <p>Make the UM BWMC financial assistance policy available to all patients</p>	<p>Anne Arundel County, emphasis on North and West Counties, and individuals of health disparities</p>	<p>Number of referrals provided</p> <p>Number of education resources provided</p> <p>Number of patients assisted by UM BWMC financial assistance policy</p> <p>Decrease in uninsured ED visits</p>
<p>Reduce the number of Emergency Department visits for conditions that can be managed through primary care provider offices, or urgent care</p>	<p>Provide education and information to increase community knowledge on where to access the appropriate level of care</p>	<p>Anne Arundel County, emphasis on North and West Counties, and individuals of health disparities</p>	<p>Number of education resources provided</p> <p>Number of referrals provided</p>

	<p>Remain a resource for patients who do not have a usual primary care provider  Maintain and provide resources to community organizations, such as FQHCs, to refer as necessary</p> <p>Linkage to care coordination through the Transitional Care Center and Nurse Navigators for high utilization patients presenting in the ED</p>		<p>Increase in the number of new primary care appointments made</p>
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**Priority Area: Healthy and Safe Social Environments**

**Goal: Increase social support to address social determinates of health to youth and adults.**

<u>Annual Objective</u>	<u>Strategy</u>	<u>Target Population</u>	<u>Metrics</u>
<p>Reduce the proportion of interpersonal violence and sexual assault incidences</p> <p>Increase support to reduce gun violence in Anne Arundel County</p>	<p>Provide education and information on the importance of healthy social and physical relationships</p> <p>Provide awareness, education and resources on identifying interpersonal violence</p> <p>Provide awareness, education and resources on identifying bullying (including cyber bullying) to county youth</p> <p>Provide support through participation on the Anne Arundel County Gun Violence Task Force, and preparedness drills</p> <p>Provide support through participation with the YWCA</p>	<p>Anne Arundel County</p>	<p>Number of attendees at classes and events</p> <p>Number of education resources provided</p> <p>Number community awareness events attended by UM BWMC team members</p> <p>Number of ED visits requiring the SAFE program</p> <p>Decrease interpersonal violence (AACO measures)</p> <p>Participant feedback</p>
<p>Increase support to vulnerable youth and adults through community organization and school programs</p>	<p>Improve access to a variety of fruits and vegetables</p> <p>Provide information to SNAP program and WIC to vulnerable communities as necessary</p> <p>Maintain resource list of local food pantries and organizations, and refer as necessary</p>	<p>Anne Arundel County, with an emphasis on vulnerable zip codes identified as a food desert</p>	<p>Decrease in adults/youth self-identifying as food insecure</p> <p>Decrease in poverty levels (AACO measures)</p> <p>Increase in number of food access points in zip codes identified as food deserts (AACO measures)</p> <p>Number of referrals provided</p>

	<p>Partner with other organizations to increase access to healthy foods</p> <p>Provide support to Anne Arundel County through workgroups, events, and other initiatives to address housing instability and homelessness</p>		<p>Number of education resources provided</p> <p>Number of partner events to increase food access</p> <p>Number of community awareness events attended by UM BWMC team members</p> <p>Investments in local food security efforts</p>
<p>Increase the number of opportunities for youth and adults to develop skills to join the health care workforce</p>	<p>Provide opportunities for UM BWMC Human Resources to conduct resource events, informational sessions, and interview future employees</p> <p>Develop a pipeline for youth and adults to build skills that would lead to employment and career advancement</p> <p>Provide opportunities for technology students learning a health care trade to attend informational sessions and/or apply to open positions within UM BWMC</p> <p>Provide skill training opportunities for youth and college students, through education sessions and internships</p> <p>Provide volunteer and internship opportunities for youth and adults</p>	<p>Anne Arundel County, emphasis on residents age 16 years and older</p>	<p>Number of talent acquisition events</p> <p>Number of new hires to UM BWMC</p> <p>Number of employees who advanced in their career</p> <p>Number of education resources and events provided to local high schools</p> <p>Number of education resources and events provided to local colleges</p> <p>Number of new volunteers at UM BWMC</p> <p>Number of students hosted as interns at UM BWMC</p> <p>Number of skills training opportunities provided</p>

## Appendix 1: Collecting and Analyzing Data

The author of the Community Health Needs Assessment was Dr. Pamela Brown. Dr. Brown is the Executive Director of the Anne Arundel County Partnership for Children, Youth and Families. She completed her Ph.D. in Educational Leadership at Florida Atlantic University, with a dissertation focused on the importance of community partnerships in diverse neighborhoods. She is certified to conduct ethical research through the Collaborative Institutional Training Initiative at the University of Miami. She has been conducting community needs assessments for over 20 years. Transcription of informant interviews and focus groups was provided by Lisa Kovacs, Administrative Coordinator at the Anne Arundel County Partnership for Children, Youth and Families.

No written comments on the previous CHNA were received to be incorporated into this CHNA.

The quantitative portion of the CHNA consisted of a secondary data analysis of local, state and federal data sources. The Anne Arundel County Department of Health assisted with secondary data analysis. Population and socio-economic statistics were compiled using data from the United States (U.S.) Census Bureau's Population Estimates Program and the American Community Survey 1-Year and 5-Year Estimates. All data is based on census estimates except for 2020 census population data, which has been updated. Birth and death data files were obtained from the Maryland Department of Health and Mental Hygiene, Vital Statistics Administration. The emergency department (ED) and inpatient hospital discharge data files were obtained from the Maryland HSCRC for topics such as birth, mortality, and hospital utilization. Other data sources used for this report were: Maryland Vital Statistics Annual Reports, Maryland Department of Health and Mental Hygiene's Annual Cancer Reports, Behavioral Risk Factor Surveillance System (BRFSS), Center for Disease Control and Prevention's CDC WONDER Online Database, Centers for Medicare and Medicaid Services, National Vital Statistics Reports and County Health Rankings, and a variety of local databases. Specific data sources are listed throughout this report.

Additionally, there are hard-to-reach populations such as domestic violence victims and homeless individuals for which data is not readily available. Data is only being captured when individuals come into contact with services. Therefore, the CHNA may underestimate the true burden of some health issues within Anne Arundel County. Another limitation of the data in the report is that there is a delay between when secondary data is collected and made available.

Focus groups and key informant interviews were used to solicit the thoughts and opinions of diverse Anne Arundel County residents, health care providers, social service providers and community leaders. A shortcoming of the qualitative data is that not all community perspectives will be obtained, although we did our best to engage a diverse and representative sample.

**A total of 11 key information interviews took place and included representation from:**

CEO, University of Maryland Baltimore Washington Medical Center (UM BWMC)

CEO, Luminis Health Anne Arundel Medical Center (AAMC)

Anne Arundel County Health Officer

Executive Director, Anne Arundel County Mental Health Agency

Director, Anne Arundel County Crisis Response

Clinical Director, Anne Arundel County Mental Health Agency

Superintendent, Anne Arundel County Public Schools

County Executive, Anne Arundel County

Faith leader

Public housing resident

Primary Care Physician

**Sixteen focus groups/community meetings contributed to this report including:**

AAMC and UM BWMC Emergency Department and Emergency Response personnel

Behavioral health providers

Behavioral health co-occurring committee

Disabled residents, providers and clients

Seniors, providers and clients

Childcare providers and early childhood educators

Human services providers and advocates

Pupil Personnel workers

Anne Arundel County Health Department senior staff

Public housing providers

Not-for-profit leaders

South County stakeholders

North County stakeholders

West County stakeholders

Annapolis stakeholders

Hispanic community

With the permission of participants, interviews and conversations were recorded and transcribed, and authorization to use their words in the final report was given with individual names redacted.

After all data was collected and analyzed, UM BWMC used the data from the respective community benefit service area, listed in figure 1, to identify the unique priorities for the communities.

The joint county-wide CHNA is available at [www.aahealth.org/statistics-reports](http://www.aahealth.org/statistics-reports). This report contains detailed narratives, tables, graphs and maps. Where possible, comparisons were made to state and national data, and data was extracted by age, gender, race, ethnicity and zip code; however, not all data was published in the county-wide CHNA.

\* Due to delays in reporting at the local, state, and federal levels, some data may be outdated and/or has changed prior to this report being published. It is also important to note that some reported data may have been impacted by the COVID-19 pandemic and not be a true representation of pre-pandemic health care statistics and outcomes.

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