UNIVERSITY of MARYLAND
BALTIMORE WASHINGTON
MEDICAL CENTER

Community Health Needs Assessment Fiscal Years 2020-2022

Approved by the UM BWMC Board
Community Benefit Committee: June 10, 2019

Published: June 18, 2019

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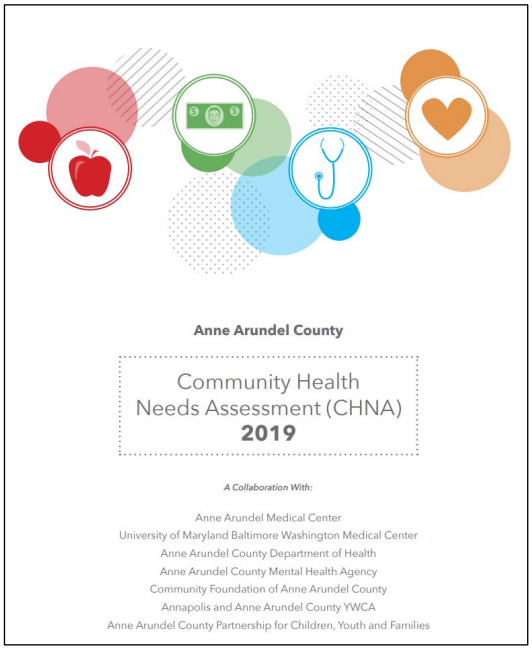
Section 1: Community Health Needs Assessment (CHNA)

The Anne Arundel County Health Needs Assessment (CHNA) was conducted under the auspices of the Healthy Anne Arundel Coalition with leadership from UM BWMC, Anne Arundel Medical Center, Anne Arundel County Department of Health, Anne Arundel County Mental Health Agency, Inc., Community Foundation of Anne Arundel County, Annapolis and Anne Arundel County YWCA, and the Anne Arundel County Partnership for Children, Youth and Families. The goal of the CHNA was to help frame informed decisions about community health needs and trends in Anne Arundel County in order plan, implement and evaluate actions to address those needs. The CHNA was unveiled at a community meeting and has been made widely available to the public. 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.



Process

The author of the CHNA 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. She is a University Research Reviewer and Dissertation Chair for the University of Phoenix specializing in qualitative case study methods. 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.

The CHNA used quantitative and qualitative methods and was designed to be as comprehensive as feasible. No written comments on the previous CHNA were received to be incorporated into this CHNA. A community meeting sponsored by the Healthy Anne Arundel Coalition to discuss and prioritize the CHNA findings was attended by approximately 40 community members, including county residents, health care and social service provider and representatives from schools, businesses and community organizations.

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. The CHNA includes estimates from hard to reach portions of the population, such as drug users, domestic violence victims, and homeless individuals. Data on these subpopulations primarily came from police reports, Emergency Department (ED) data, and the public school system. It only captures individuals who have come in contact with these 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 eleven focus groups were conducted. The groups included representation from:

- AAAMC and UM BWMC Emergency Department and Emergency Response personnel
- Low-income youth from public housing
- Behavioral health providers
- Domestic violence and sexual assault victims
- Seniors
- Hispanic community
- Human services providers and advocates
- Early childhood advocates
- Community health providers
- Aging and disabilities providers
- Pupil Personnel Workers
- Anne Arundel County Health Department senior staff
- Criminal justice system representatives

The twenty-six key informants that provided qualitative data for the report included:

- CEO, Anne Arundel Medical Center
- CEO, University of Maryland Baltimore Washington Medical Center
- 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
- Domestic Violence Coordinator, Anne Arundel Medical Center
- County legislative leader
- Director, Department of Social Services
- Schools Superintendent
- Middle School Ambassador
- Three Domestic Violence victims
- Director, Anne Arundel County Department of Aging and Disabilities
- Hispanic Community leader
- Anne Arundel County Chief of Police
- Anne Arundel County Transportation Director
- County Executive
- County Administrative Officer
- Faith leader
- Public housing resident
- Formally homeless youth
- Executive Director, Community Health Agency
- Executive Director, YWCA
- Executive Director of Alternate Education for the public school system

The CHNA provided a detailed profile of Anne Arundel County and illustrated the social determinants of health that impact residents. The assessment identified a variety of community health needs including:

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

The county-wide CHNA is available from UM BWMC's web site at www.umbwmc.org/community-benefit and from the Healthy Anne Arundel Coalition's web site at www.aahealth.org/healthyannearundel/chna. This report contains detailed narratives, tables, graphs and maps. Where possible, comparisons were made to state and national data and data was distilled by age, gender, race, ethnicity and zip code; however, not all data was published in the county-wide CHNA.

A summary of the county-wide CHNA findings is included in the next section, with additional commentary and analysis specific to UM BWMC.

Summary of CHNA Findings

Demographics

According to 2016 census estimates, the Anne Arundel County population is 537,565. The Hispanic population in Anne Arundel County is growing more significantly than all races/ethnicities, increasing 205% from 2000 to 2016.

Anne Arundel County Ethnic and Racial Composition (2000-2016)

Ethnic/Racial Composition in Anne Arundel County, 2000-2016							
	2000		2010		2016		Percent Change 2010 - 2016
	Amount	%	Amount	%	Amount	%	%
Total	**489,656**	**100**	**537,656**	**100**	**559,737**	**100%**	**14.3**
Non-Hispanic Whites	390,519	79.8	405,456	75.4	393,514	70.3%	0.8
Other Races:	**99,137**	**20.2**	**132,200**	**24.6**	**166,223**	**29.7%**	**27.9**
Hispanic or Latino	12,902	2.6	32,902	6.1	39,402	7.9%	205.4
Black/African- American	65,755	13.4	83,484	15.5	87,090	15.6%	32.4
Other*	20,480	4.2	15,814	3	39,731	7.1%	94
* Includes: "American Indian and Alaskan Native", "Asian", "Native Hawaiian or other Pacific Islander", "Some other race", or "Two or more races". Therefore, the "White" and "Black" figures are those who were counted as "White alone" or "Black alone."							

U.S. Census Bureau, American Community Survey, 2016

Currently, 13.4% of Anne Arundel's population is 65 or older. This portion of the population is expected to increase until 2030. As such, seniors will have an increasing impact on county services, supports, resource allocation, and health care use. The number of Medicare beneficiaries is rising in the county as a result of the growing senior population. The county has served almost 3,000 new beneficiaries in the last three years. The number who are also eligible for Medicaid, due to low income, rose from 10.9 percent to 11.3 percent in three years.

The income gap between rich and poor in the county has widened since 2010. Anne Arundel County's median household income is $99,652, which is 19% higher than Maryland and 65% more than the nation. Poverty is concentrated in the northern (near UM BWMC) and southern portions of the county. The highest percentage of poverty is in the ZIP Code that contains Brooklyn Park at a staggering 27.3 percent followed by Curtis Bay; both areas that border Baltimore City.

Anne Arundel County Selected Poverty Percentages by ZIP Code

Selected Poverty Percentages by ZIP Code, 2016		
ZIP Code	**Area**	**Poverty Percentage**
21225	Brooklyn Park	27.3%
21226	Curtis Bay	16.6%
21060	Glen Burnie (East)	7.9%
21061	Glen Burnie (West)	9.2%
	Anne Arundel County	5.8% (2017 estimates)

US Census Bureau, American Community Survey, 2016 and 2017 Estimates

Social Determinants of Health

Social determinants of health can impact individual and community health. Social determinants of health include race and ethnicity, employment status and income level, education, housing quality, neighborhood safety, family and social supports, and sense of community belonging. Many demographic and health indicators associated with poorer health status and outcomes are found in the northern (near UM BWMC) and southern portions of the county, and parts of Annapolis.

Rising Demographic, Socioeconomic and Health Indicators by Selected ZIP Codes, 2013

Rising Demographic, Socioeconomic, and Health Indicators by ZIP Code Anne Arundel County, 2017								
ZIP Code	**Area**	Poverty Percentage	Percent without High School	Percent of Households on Snap	ED Visit Rate per 1,000	Percent Low Birth Weight Infants	Preventable Hospitalization Rate per 1,000	Minority Population
20711	Lothian	11.7%	13.2%	23.4%	389.7	8.4%	6.8	25.6%
20714	North Beach	10.6%	7.5%	8.6%	285.0	8.9%	<11	12.4%
20724	Laurel	3.8%	9.1%	4.2%	234.6	9.3%	2.4	64.6%
20751	Deale	10.8%	8.7%	5.4%	233.1	9.2%	4.6	7.1%
20758	Friendship	7.1%	3.9%	0.0%	562.4	8.8%	<11	7.1%
20765	Galesville	14.7%	20.2%	9.6%	352.8	6.3%	<11	22.5%
20776	Harwood	10.8%	7.6%	8.8%	293.1	4.4%	6.0	15.5%
20794	Jessup	7.9%	20.6%	11.8%	220.4	11.3%	2.9	52.5%
21060	Glen Burnie (East)	7.9%	13.7%	12.6%	406.5	8.0%	6.9	29.8%
21061	Glen Burnie (West)	9.2%	13.6%	12.8%	441.9	8.0%	5.5	45.0%
21090	Linthicum Heights	7.5%	10.1%	5.1%	270.5	6.9%	5.6	10.8%
21144	Severn	7.9%	8.2%	10.4%	289.2	9.2%	3.5	51.7%
21225	Brooklyn	27.3%	20.1%	32.6%	858.2	9.9%	8.9	59.4%
21226	Curtis Bay	16.6%	15.8%	16.8%	509.6	8.7%	6.6	26.9%
21401	Annapolis	7.9%	7.2%	8.9%	364.5	7.7%	5.4	31.5%
21403	Eastport	6.9%	9.8%	6.9%	331.8	7.5%	4.4	37.5%
	Anne Arundel	**6.1%**	**8.1%**	**7.0%**	**340.0**	**7.7%**	**4.6**	**29.7%**

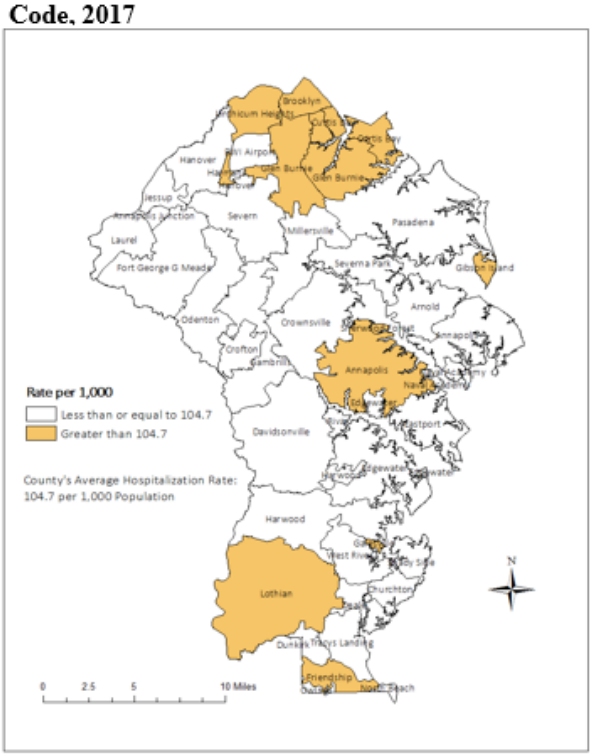
*** Red Shading= Higher than County Average**

**** Green Shading = UM BWMC Service Area**

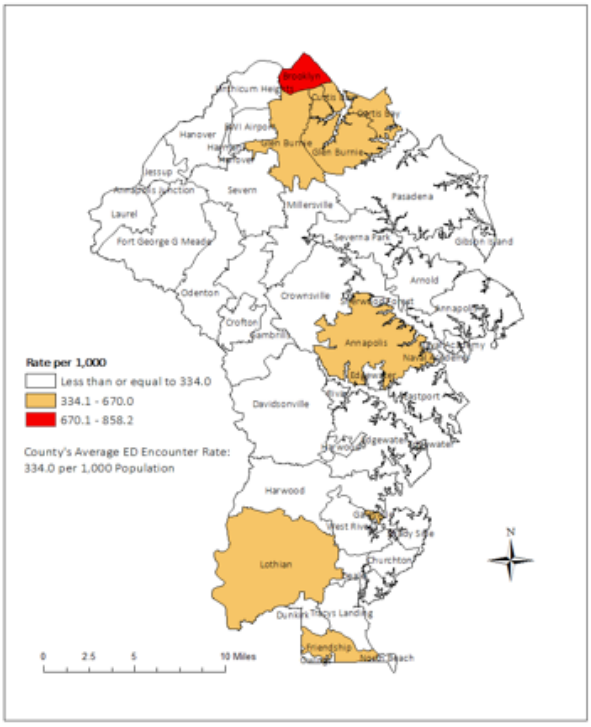
US Census American Community Survey 5 year estimates, 2012-2016; Maryland Health Services Cost Review Outpatient Files, 2017

When patterns of hospitalization and Emergency Department visits are examined by ZIP code they generally reflect the social determinants illustrated above. ZIP code 21225, which contains Brooklyn Park, has the highest hospitalization and emergency department visit in the county.

Hospitalization Rate per 1,000 Population by ZIP Code, 2017



Emergency Department Encounters per 1,000 Population by ZIP Code, 2017



There are a variety of needs concerning social determinants of health. There is a lack of public transportation throughout Anne Arundel County, and the operating bus routes have limited hours. This is especially an issue for the county's low-income and elderly residents. Limited transportation affects residents' ability to access health care services and their educational and employment options. Thirteen percent of county residents live in areas considered food deserts and don't have ready access to healthy eating options which contributes to higher levels of obesity and associated chronic health conditions such as diabetes. Affordable, quality child care is in scarce supply. There is limited affordable housing in the county, and homelessness has been increasing. The amount of money spent on housing limits the funds available for meeting other personal needs, including health care, healthy food, and opportunities for physical activity and recreational activities that can reduce stress.

Health Care Access and Utilization

Anne Arundel County is served by two major hospitals: University of Maryland Baltimore Washington Medical Center (UM BWMC) in Glen Burnie and Anne Arundel Medical Center (AAMC) in Annapolis. Both hospitals are affiliated with academic medical centers, which offer 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. However, the medical-surgical services

available at Harbor Hospital have been declining over recent years, although an inpatient Behavioral Health service was added.

Additionally, there are four Federally Qualified Health Centers (FQHCs) that serve county residents: Chase Brexton Health Care (Glen Burnie), Total Health Care (Odenton), Family Health Centers of Baltimore (Brooklyn neighborhood of Baltimore City), and Owensville Primary Care (West River area in South County). Chase Brexton Health Care is located across the street from UM BWMC and we have a formal partnership agreement with them. We also collaborate with Total Health Care.

The Anne Arundel County Department of Health offers a range of physical and behavioral health services at five clinic sites. The Anne Arundel County Mental Health Agency, Inc. provides a wide range of mental health services to Medicaid recipients and other low-income and uninsured county residents who meet certain criteria. 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. All hospitals in Maryland have financial assistance policies that provide medically necessary services to all people regardless of their ability to pay. Depending on their circumstances, patients can receive coverage for up to 100% of their medically necessary care. Payment plans are also available. FQHCs, community clinics and governmental providers offer services on a sliding scale or free basis. 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 patients.

In Maryland, under the Affordable Care Act (ACA), persons whose income is up to 138% of the poverty level are eligible for Medicaid. The number of Medicaid enrollments increased from 84,616 in 2014 to 93,425 in May 2018, a ten percent increase. However, there are still many primary care providers who do not accept Medicare/Medicaid. In addition, a small percentage of county residents such as undocumented people, those not enrolled in Medicaid despite being eligible, and people opting to pay the annual penalty instead of purchasing insurance will remain uninsured.

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 more difficulty obtaining prescriptions and attending necessary appointments.

Primary Care Physicians, Dentists and Mental Health Providers in Anne Arundel County (2018)

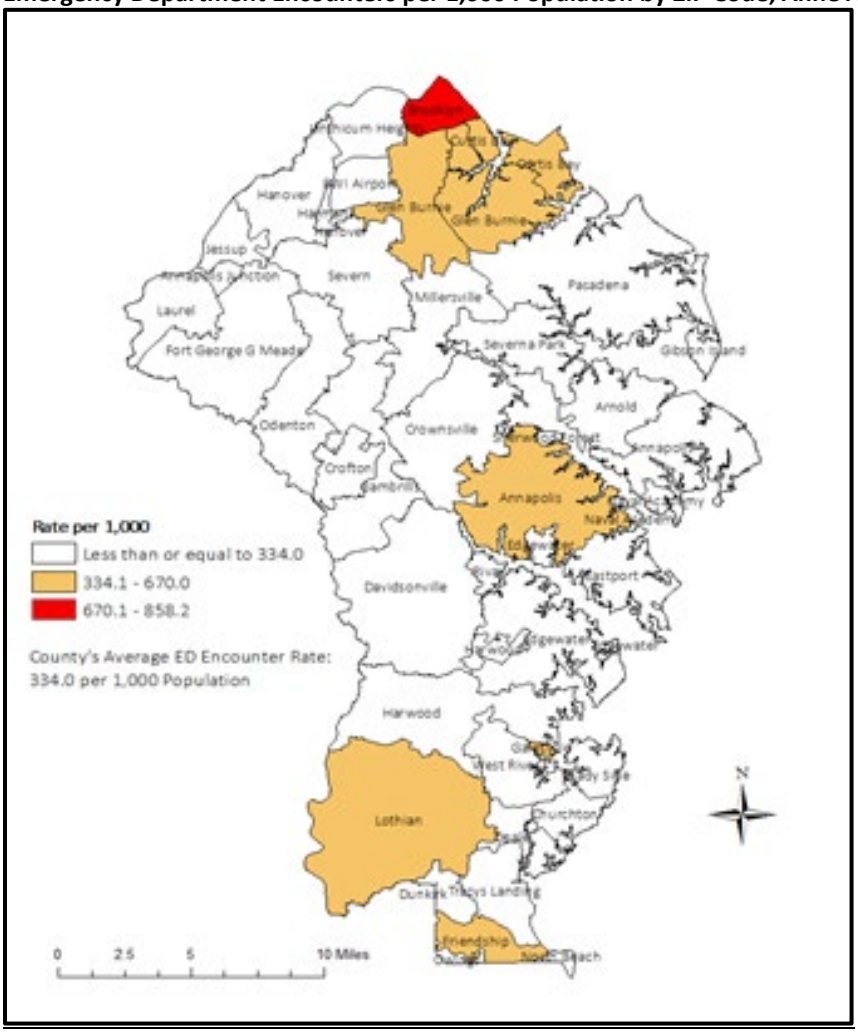
Primary Care Physicians, Dentists and Mental Health Providers Anne Arundel County, Maryland				
	Anne Arundel County Total	**Anne Arundel County Ratio**	**Maryland Ratio**	**Top U.S. Counties (90th percentile)**
Primary Care Physicians (2018)	386	1,450:1	1,140:1	1,030:1
Dentists (2018)	378	1,480:1	1,320:1	1,280:1
Mental health providers (2018)	861	650:1	460:1	330:1

County Health Rankings, Anne Arundel County Department of Health, 2018,

Emergency Department and Hospital Utilization

In 2016, 9.6 percent of Emergency Department visits were by uninsured residents. Although not all visits to the Emergency Department are avoidable, care in lower level settings for some conditions, such as diabetes and hypertension, can potentially reduce the number of visits, thereby reducing costs and increasing the quality of care.

Emergency Department Encounters per 1,000 Population by ZIP Code, Anne Arundel County, 2017



Anne Arundel County Department of Health, 2018

In 2017 there were 59, 277 hospital stays in Anne Arundel County; a rate of 104.3 stays per thousand population. The hospitalization rate increased with age from 68.7 hospitalizations per 1,000 population among 0–18 year olds, to 262.5 hospitalizations per 1,000 population among those aged 65 years and over. (Note: This data only includes Anne Arundel County residents admitted to hospitals in Maryland.)

Inpatient Hospitalizations in Anne Arundel County, 2017

Inpatient Hospitalizations Anne Arundel County 2017		
	Number	**Rate per 1,000**
Total Hospitalizations	59,277	104.3
Age		
0 to 18 Years	9,763	68.7
19 to 39 Years	12,917	83.3
40 to 64 Years	16,607	84.9
65 Years and Over	19,990	262.5
Sex		
Male	25,656	92.7
Female	33,621	118.8
Race/Ethnicity		
White, NH	38,719	96.9
Black, NH	11,747	132.5
Asian, NH	1,271	62.1
Hispanic (Any Race)	3,368	84.7

Anne Arundel County Department of Health, 2017

The rate changes depending on ZIP code. The ZIP Code containing Brooklyn Park has the highest rate of hospitalization at 163.9 per 1,000 residents. The Glen Burnie rates are also notable when population density is considered. These three zip codes are in UM BWMC's service area. Lack of access to primary care, multiple health issues presenting at the same time, poverty, unhealthy food and lack of medication management were reasons given for the high rates.

Inpatient Hospitalizations by ZIP Code, Anne Arundel County, 2017

Inpatient Hospitalizations by ZIP Code Anne Arundel County 2017			
Town	**Zip Code**	**Number**	**Rate per 1,000**
Brooklyn	21225	2396	169.3
Curtis Bay	21226	555	126.4
Friendship	20758	66	155.3
Galesville	20765	53	147.2
Glen Burnie (East)	21060	4307	133.9
Glen Burnie (West)	21061	6717	123.8

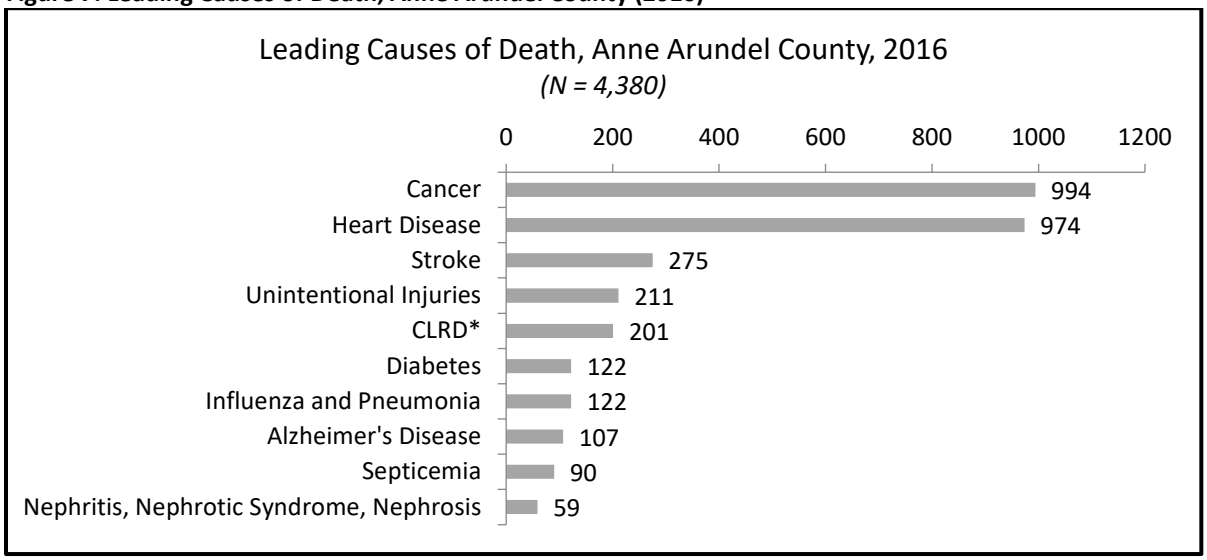
Anne Arundel County Department of Health, 2018

Health Indicators

Leading Causes of Death

In 2016, there were 4,380 deaths in Anne Arundel County, and life expectancy was 79.6 years. Accidental (unintentional injury) deaths rose to the fourth leading cause of death driven by increases in opioid overdose deaths. Cancer was the leading cause of death, although these number have seen a 1 percent decrease since 2013. Overweight and obesity continue to drive poor health outcomes for the county, including secondary issues such as diabetes. Diabetes was the sixth leading cause of death.

Figure 7: Leading Causes of Death, Anne Arundel County (2016)



Maryland Department of Health, Vital Statistics Administration, 2016

Heart disease accounts for 22 percent or 974 of all county deaths as of 2016. That number has risen almost 10 percent since 2013. Age-adjusted death rates for coronary heart disease decreased for Blacks and Whites between 2013 and 2016. While Blacks still have the highest death rates in the county per 100,000 residents, that number decreased by 18 percent in just three years . The decrease for Whites was only 8 percent.

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 health conditions was also identified as a community health problem.

Overweight and obesity are determined using weight and height to determine a BMI or "body mass index" measure. Between 2012 and 2016, the percent of overweight adults (Body Mass Index of 25 to 29.9) 18 years and older in Anne Arundel County rose slightly from 36.7 percent to 37.2 percent while the state average fell. The percent of county residents who are classified as obese (Body Mass Index 30 and over) also rose from 27 to 31 percent, as did the state average. Many factors play a role in weight including low income, lifestyle, surrounding environment, access to healthy food, genetics and certain diseases. Obesity is prevalent in low income families in the county for a variety of reason: 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 a greater availability of fast food restaurants selling cheap, filling food, and there are fewer recreational facilities for exercise. The streets may be unsafe and there is little for children to do.

Smoking is associated with an increased risk of heart disease, stroke, lung and other types of cancers, and chronic lung diseases (Centers for Disease Control, 2018.) The rate of adult tobacco use has continued to drop in the county and is now equal to the state and less than the nation. According to the 2016 Middle School Risk Behavior Survey, cigarette smoking by Anne Arundel Middle School students is trending significantly downwards. However, many participants commented on the increased use of e-cigarettes and vaping, in and outside of the school gates.

UM BWMC clinical staff have 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.

Senior Health

Most seniors have at least one chronic health condition, and many have multiple conditions. The top five conditions seniors suffer from are hypertension, hyperlipidemia, arthritis, ischemic heart disease and diabetes (Administration on Aging Administration for Community Living, 2018).

When parents and/or caregivers of the elderly lack the ability or the dollars to care for an aging family member, the Emergency Department may be the only option to achieve some respite. When family members are unable to care for their relative, or are absent or non-existent, some entity or professional has to become the guardian for that person. Hospital and Emergency Department employees may apply for guardianship of the patient so that decisions can be made about their living arrangements and future care, although the process to obtain guardianship through the court system can take months.
As one CHNA participant commented, "We're seeing a lot more respite care. We're seeing a lot more care management cases where a person may be in the Emergency Department for weeks on end. We've seen guardianship cases when patients are in the hospital for months, taking up a bed for no reason when there is no medical indication that they need to be here, but they need to be somewhere safe."

Behavioral Health

The rise in behavioral health issues for every age group, and the lack of appropriate services and service providers (e.g. psychiatrists, crisis beds, residential services), were the major concerns for all 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. Participants in this needs assessment shared many opinions as to why mental health issues are increasing including, poverty, isolation, social media, increasing societal violence, the fast pace of a technological world and the reduction of stigma around mental health services.

Emergency Department Utilization

The County's hospital Emergency Departments are often the receiving facilities for behavioral health issues. In 2017, there were 12,446 behavioral health encounters; mood disorders accounted for 26.3 percent of those and over 38 percent were alcohol or substance abuse related.

ED Encounters for Behavioral Health Conditions in Anne Arundel County (2017)

ED Encounters for Behavioral Health Conditions Anne Arundel County 2017			
	Condition	**Frequency**	**Percent**
1	Mood Disorders	3,277	26.3
2	Alcohol-Related Disorders	2,546	20.8
3	Substance-Related Disorders	2,212	17.8
4	Anxiety Disorders	1,654	13.3
5	Suicide and Intentional Self-Inflicted Injuries	724	5.8
6	Schizophrenia and Other Psychotic Disorders	655	5.3
7	Attention-Deficit Conduct and Disruptive Behavior Disorders	379	3.1
8	Delirium Dementia and Amnestic and Other Cognitive Disorders	348	2.8
9	Adjustment Disorders	295	2.4
10	Miscellaneous Mental Health Disorders	112	0.9
	Total	12,446	

Anne Arundel County Department of Health, 2018

Early Childhood and School-Aged Youth

The availability of affordable, quality child care was identified as a significant issue.

Increased behavioral issues in the birth to five early childhood population are causing widespread concern in every system. Behavioral problems in children as young as two years old are disrupting child care facilities including Early Head Start and Head Start. Professionals are divided as to the cause of this increase but they all agree that this is a new phenomenon unrelated to income. Many suggested the use of social media by parents and young children is leading to huge deficits in social and emotional skills. Some serious mental health issues are surfacing earlier; often co-occurring with developmental issues such as autism. The number of crisis interventions in the public school system for social and emotional issues has doubled since 2013, reaching close to 5,000 during the 2016-2017 school year.

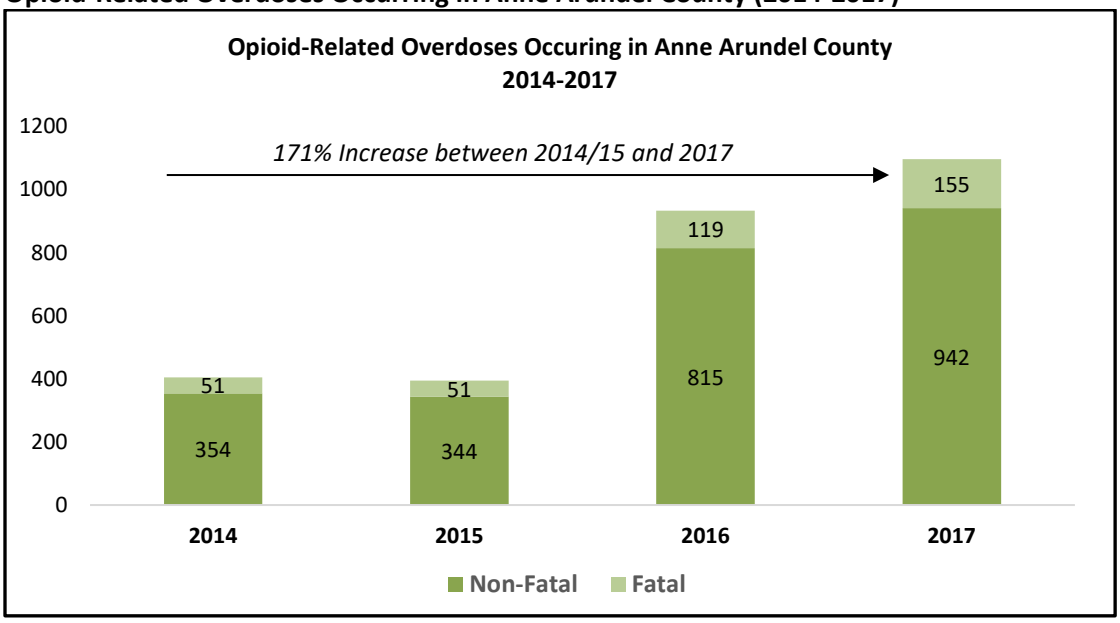
As of 2016, the Anne Arundel County youth suicide rate was 7.8 per 100,000, an increase compared to the rate of 5.3 per 100,000 in 2012. The Centers for Disease Control and Prevention (CDC) estimates that for each youth suicide, there are 25 suicide attempts. Between 2012 and 2016, there were 1,306 Emergency Department encounters in Maryland hospitals for suicide attempts by Anne Arundel County youth aged 10 to 24 years, an average of 261 per year.

Opioid Overdoses

Prescription opioid addiction is now a major public health crisis. Although Anne Arundel County is the fifth largest county in the state in terms of population, it has the third highest rate of prescription opioid related deaths as of 2017. In 2017, Anne Arundel County police reported almost 1,100 opioid-related overdoses occurring, a 171 percent increase since 2014. The rate of fatal overdoses continues to

increase, driven by the introduction of fentanyl into the community. Fentanyl-related deaths in the county have increased significantly since 2013 and surpassed heroin related deaths through 2017. As with many other county issues, geography plays a part with the majority of overdoses occur in North County and Annapolis.

Opioid-Related Overdoses Occurring in Anne Arundel County (2014-2017)



Note: In 2017, there were 117 Persons with 2 or more overdoses.
Anne Arundel County Police Department, 2018

The current opioid crisis has many victims. The number of newborns assessed positive for substances in their systems, including methadone, According to all participants, the children of opioid victims are traumatized and ashamed. Several suggested we need narcotics support groups for teen family members. Young children born into homes where heroin is used may be neglected, has risen 144 percent since 2014 from 74 to 181 (Department of Social Services, 2018).

Maternal and Child Health

The infant mortality rate in Anne Arundel County between 2010 and 2014 was 5.5 deaths per 1,000 live births which is lower than both the United States (6.0 deaths per 1,000 live births) and Maryland (6.6 deaths per 1,000 live births) during the same period. Although the overall infant mortality rate is lower for the county than the state average, disparities exist when stratifying the data by race and ethnicity. Blacks have the highest infant mortality rate in the county (11.2 deaths per 1,000 live births) compared to 5.3 deaths and 4.0 deaths per 1,000 births for Hispanics and Whites respectively.

Infant Deaths and Infant Mortality Rates by Race and Ethnicity, Anne Arundel County, 2010-2014

Race/Ethnicity	Number of Infant Deaths	Infant Mortality Rate
White, Non-Hispanic	89	4.0
Black, Non-Hispanic	68	11.2
Hispanic, Any Race	22	5.3

Source: Maryland Department of Health and Mental Hygiene Vital Statistics Administration, 2013

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 neurodevelopmental disabilities. In Anne Arundel County, the percentage of low birth weight babies is dropping slowly and is less than the state average at 8.7%. However, there are several ZIP codes concentrated in the northern part of the county where the percentage of low birth weight infants is much higher than the overall county average of 7.9%, especially in Brooklyn, Severn, Laurel, Glen Burnie (West), Hanover, Millersville, and Jessup. Five of these zip codes within UM BWMC's service area.

Social Environment and Violence in the Community

Many participants in this needs assessment lamented the lack of sports and recreation opportunities for children, youth and adults across the county. Parents from every race, ethnicity and income level decried the lack of "active things to do" for children and youth. While some communities have a recreation center for youth, many do not.

Social media, including the active use of smart phones and tablets, is a major concern for residents and professionals in every area of the county. Several suggested that the ease of electronic access to pornography for very young children is linked to rising child on child sexual abuse within the school system. The constant access to electronic information is impacting every age group and demographic: Increases in bullying, suicide and suicidal ideation for youth, have been linked to the constant use of social media apps such as Instagram and Snapchat. Youth in low income communities are emulating international gang members, their colors and lifestyles by following their on-line presence. Body language, eye contact and social behavior of every kind is now lessened by the isolation of cell phone use. Video-gaming is replacing outdoor sports and recreation, and it is addictive.

All participants commented on the increase in the use of social media for adults. Some commented on the isolation it causes and the need to look at every experience through the lens of a photo for Facebook. As one professional said. Others linked the use of social media and rapid electronic communication with rising rates of drug use, depression and anxiety.

Anne Arundel County Police Department tracks domestic violence statistics. The data shows an upward trend although there was a dip in numbers for the 2015-2016 year. The statistics for the 2018 year are alarming. The numbers for the six month period are almost as high as for the previous 12 months, with slightly over 1000 assaults. These statistics confirm anecdotal data from police, schools and hospital personnel who all reported a notable increase in domestic violence over the same period.

The CHNA also identified rising youth gang activity, particularly in the Annapolis area and the western part of the County.

In 2018, the county's Child Advocacy Center investigated 326 sexual abuse cases, of which seven were for sexual assault (Anne Arundel County Department of Social Services, 2018). Respondents noted a large increase in the number of child on child sexual assaults that are being reported by the school system and other agencies.

The 50-mile radius surrounding BWI airport is becoming known as the third-most-lucrative area in the nation for trafficking in people (Maryland Human Trafficking Taskforce, 2018.) Anne Arundel County

Police Department tracks the number of sex trafficking incidents for the county. While the numbers were stable between 2015 and 2017, data for the first 6 months of 2018 are showing an almost 100 percent increase in cases, with 18 cases during those six months. UM BWMC has identifies and treated sex trafficking victims in its Emergency Department.

The Environment

The 2016 State of the Bay Report from the Chesapeake Bay Foundation showed that each of the three indicator categories—pollution, habitat, and fisheries have improved since 2014. However, despite many efforts by federal, state, and local governments and other interested parties, pollution in the Bay does not meet existing water quality standards. All of the county's waterways are considered "impaired" because of excessive levels of major contaminants, which are largely a result of untreated storm water runoff.

Air quality is another issue for the county. Anne Arundel was given an F by the American Lung Association in 2018 for an average of 13 high ozone days, a reduction from the 2013 rate of 23 days. High ozone causes respiratory harm (e.g. worsened asthma, worsened COPD, inflammation,) can cause cardiovascular harm (e.g. heart attacks, strokes, heart disease, congestive heart failure) and may cause harm to the central nervous system.

Impact of Community Health Initiatives Since the Previous CHNA

UM BWMC's last CHNA, conducted in FY16, identified the following community health improvement priorities:

- Chronic Health Conditions
- Behavioral Health
- Maternal and Child Health
- Access to Health Care and Utilization
- Community Support

A CHNA conducted in FY13, identified the following community health improvement priorities:

- Chronic Disease (Obesity, Heart Disease, Diabetes & Cancer)
- Violence Prevention
- Healthy Babies
- Influenza Education and Prevention
- Access to Healthy Food and Healthy Food Education

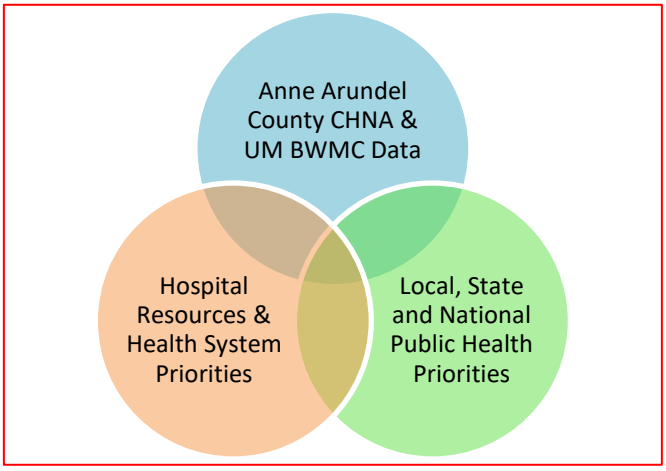
The priorities from the FY16 CHNA overlap with the community health needs and improvement priorities identified by the most current CHNA. During the past three years considerable work was undertaken by UM BWMC to address these significant priorities. Each year, state and federal reports described the actions UM BWMC undertook and the resources that we committed to community health improvement initiatives that met applicable guidelines related to community benefit. Process measures related to the number of participants reached and partnerships developed and program-specific short term outcomes were tracked, measured and reported. In FY16-18, UM BWMC dedicated over $74 million to community benefit initiatives that reached more than 26,000 people.

The similarity between the health improvement priorities identified through the FY13, FY16 and FY19 CHNAs demonstrate the difficulty in measuring the long-term impact of the community health improvement initiatives at the population level. Many indicators, such as cancer incidence and mortality rates, are the result of long term health status, behaviors, policies and environmental factors. It can take years and even decades to see significant and sustained progress. As focus groups participants acknowledged, there is no quick fix for eliminating chronic disease risk factors, and significant behavior changes might take a generation. Also, there is often a delay between when population-level quantitative data is available.

Qualitative feedback obtained from the focus groups and stakeholder interviews provided "real time" feedback on our efforts. Although these respondents have seen progress in partnership development, and collaborative initiatives, improved access to health care, and new initiatives to improve care coordination and transitions of care, there was also consensus that much work remains to be done.

Section 2: Prioritization of Community Health Needs

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 UMMS community health improvement initiatives and national, state and local public health priorities. The plan was also developed to be responsive to Maryland's health system transformation, including the increased focus on population health and community partnerships. This approach also helped to assure that we had the necessary infrastructure and resources to successfully implement our Community Benefit Implementation Plan.



Process

Our process included:

- Convening a Community Benefit Implementation Planning Committee to develop the Community Benefit Implementation Plan. This committee included UM BWMC clinical and administrative leadership.
- Reviewing CHNA data and UM BWMC Emergency Department, inpatient and ambulatory utilization data to inform the plan development.
- Reviewing community health improvement priorities identified during UMMS Community Health Improvement Retreats.
- Reviewing the Maryland State Health Improvement Process (SHIP) priorities established as being important to improving the health status of all Marylanders (these are aligned with Healthy People 2020 national goals) and considering additional public health priorities identified by county, state and national governments and health organizations.
- Identifying the infrastructure, staffing, clinical expertise and other resources at UM BWMC and in the community to support the successful implementation of community benefit strategies.
- Refining the plan with input from executive UM BWMC and UMMS leadership.
- Formally adopting the CHNA and Community Benefit Implementation Plan for FY19-21 by both the UM BWMC Community Benefit Board and the UM BWMC Board of Directors.

UM BWMC's Selected Community Benefit Priorities

This process resulted in the following community benefit strategic priorities being identified for UM BWMC's Community Benefit Implementation Plan.

- Chronic Health Conditions (Cancer, Cardiovascular Disease, Diabetes, Obesity/Overweight, Chronic Lower Respiratory Diseases[i])
- Behavioral Health
- Maternal and Child Health
- Health Care Access and Utilization
- Healthy and Safe Social Environments

An overarching theme is the reduction of health disparities among vulnerable populations.

The table below illustrates the synergies between UM BWMC, local, state and national priorities:

Alignment of UM BWMC Community Benefit Priorities with Public Health Priorities

UM BWMC Community Benefit Priority	**Healthy Anne Arundel Priority** (Local Health Improvement Coalition priority)	**Maryland SHIP Priority** (aligned with Healthy People 2020 National Goals)
Chronic Health Conditions (Cancer, Cardiovascular Disease, Diabetes, Obesity/Overweight, Chronic Lower Respiratory Diseases)	**Obesity Prevention** – selected because it a major contributing factor to several chronic health conditions (diabetes, heart disease, cancer)	**Healthy Living** (healthy weight, physical activity, tobacco cessation, life expectancy) **Quality Preventive Care** (mortality rates for cancer and heart disease)
Behavioral Health	**Prevention and Management of Behavioral Health Conditions**	**Healthy Communities** (child maltreatment, domestic violence, suicide)
Maternal and Child Health	This is not an identified HAAC priority since it is being addressed by the county's Fetal and Infant Mortality Review Community Action Team.	**Healthy Beginnings** (early prenatal care, low birth weight, sudden unexpected infant death rate, infant death rate)
Health Care Access and Utilization	**Access to Care**	**Access to Health Care** (persons with a primary care provider, uninsured ED visits) **Quality Preventive Care** (ED visit rates for ambulatory sensitive conditions, annual seasonal influenza vaccinations) **Quality Preventive Care** (cancer mortality rate drug-induced death rate, mortality rates for cancer and heart disease)
Healthy and Safe Social Environments	**Vision of "Healthy County, Healthy People"**	**Vision of "Healthier Maryland"**

Within these priority areas, a number of potential health improvement strategies have been identified (as described in Section 4) to address community needs. 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 expand their 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 role, collaborating role or supportive role. When taking on a leadership role, UM BWMC will provide the leadership and devote the necessary resources to assure the success of the activity or initiative. Resources can include staff time and expertise, financial allocations, in-kind contributions. When serving in a partner role, UM BWMC will collaborate with other organizations to provide the leadership and/or resources for the activity or initiative. In a supportive role, 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 or partnership role. In these instances, UM BWMC will provide assistance as resources are available.

Community Health Needs Not Selected as Community Benefit Priorities

Lack of affordable dental services, environmental health concerns, transportation barriers are community health needs identified through the CHNA not directly being addressed by UM BWMC. UM BWMC will support the advancement of community health improvement initiatives in these areas as feasible.

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. UM BWMC partners with the Anne Arundel County Department of Health to divert dental patients presenting to the ED to providers in the community. Patients will be treated within 24-48 hours of their ED visit. Care coordination will be provided to prevent repeat ED visits. UM BWMC is supportive of this grant application and will assist with grant implementation, if awarded.

Environmental health concerns are being addressed by the Anne Arundel County Department of Health's Bureau of Environmental Health Services and other local environmental advocacy organizations.

Public transportation 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 assistance for participants in our Stork's Nest prenatal education program. Anne Arundel and surrounding county governments are collaborating to expand access to public transportation in the Central Maryland region.

Other needs identified in the CHNA included affordable housing and affordable, quality child care. UM BWMC will support these priorities through participation in economic development initiatives and health professions training designed to help improve socioeconomic wellbeing of individuals and the local community.

[i] Chronic lower respiratory diseases include chronic obstructive pulmonary disease and asthma.