

2023-2024

Community Health Needs Assessment

Northwest Hospital of
LifeBridge Health



Table of Contents

EXECUTIVE SUMMARY	3
NORTHWEST HOSPITAL 2023-2024 COMMUNITY HEALTH NEEDS ASSESSMENT	3
Approach and Methodology	3
Northwest Hospital: Identified Health Needs and Priorities	3
Description of Community Served	4
Northwest Hospital Service Area	4
Demographic Highlights	4
Key Findings and Analysis: Baltimore County	5
Key Secondary Data Findings	6
Community Survey: Northwest Hospital Service Area Trends	8
Community Survey: Baltimore County Health Disparities	10
Focus Groups	12
Impact of 2021-2024 Northwest Hospital Implementation Strategy	13
Appendix: Baltimore County 2023-2024 CHNA	15

EXECUTIVE SUMMARY

Northwest Hospital is a nonprofit hospital with 367 private rooms, which has been dedicated to the needs of the greater northwest Baltimore community for over 50 years. Located in Randallstown, Northwest Hospital provides care for the citizens of Baltimore County, western Baltimore City, Carroll County, Howard County and beyond. In addition, Northwest Hospital has nearby facilities offering convenient outpatient surgery, adult day care and physical rehabilitation services.

Northwest Hospital is part of LifeBridge Health, Inc. which also includes Grace Medical Center in southwest Baltimore, Sinai Hospital and Levindale Hebrew Geriatric Center and Hospital in Baltimore City, and Carroll Hospital in Carroll County.

NORTHWEST HOSPITAL 2023-2024 COMMUNITY HEALTH NEEDS ASSESSMENT

Approach and Methodology

Northwest Hospital (Northwest) participated in a collaborative Community Health Needs Assessment (CHNA) for Baltimore County in 2023-2024. Representatives from Baltimore County Department of Health, Northwest Hospital of LifeBridge Health, Greater Baltimore Medical Center, University of Maryland St. Joseph Medical Center, and MedStar Franklin Square worked together as the CHNA Steering Committee to guide the development of this report.

These organizations collaborated to formulate survey questions, coordinate focus groups, and gather the survey data that are further analyzed in this report. In addition to examining the overall health and health-related social needs of Baltimore County residents, the CHNA process focused and reported on responses specific to the Northwest Hospital service area. This process allows Northwest Hospital and the county to continuously evaluate how best to improve and promote the health of the community. The Steering Committee engaged the services of Ascendant Healthcare Advisors to gather secondary data and analyze survey and focus group input.

Northwest Hospital: Identified Health Needs and Priorities

The Northwest Hospital President and CHNA leadership met with members of the hospital's Performance Oversight Committee on February 20, 2024, to review findings of the CHNA and to seek recommendations to prioritize the identified needs above.

Following review of secondary and primary (survey and focus group) data, the participants were asked to identify the highest priority needs based on the size and scope, severity, the ability for the hospital to make an impact, associated health disparities, and importance to the community.

The following identified needs were selected as **Priorities** for Northwest:

1. Physical Health
2. Mental Health
3. Substance Use Disorders
4. Access to Care
5. Quality of Care
6. Food Security

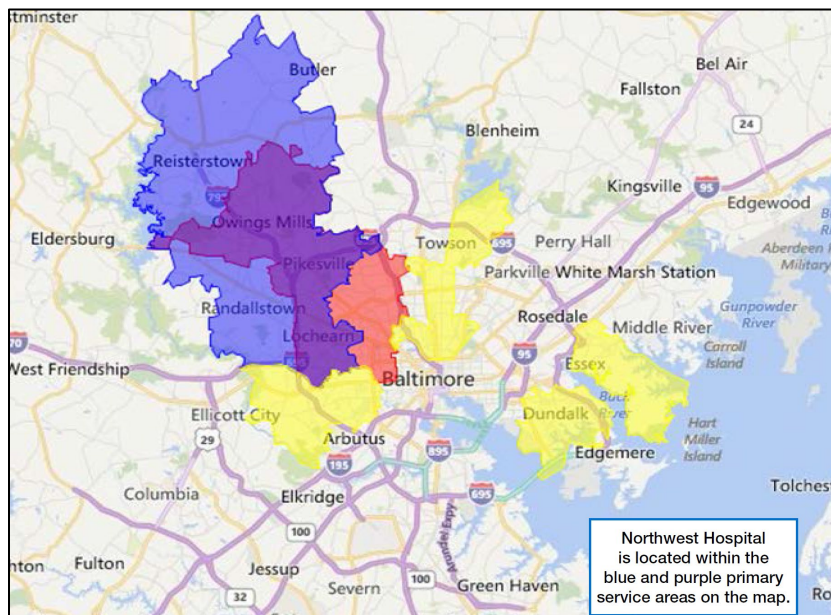
Northwest Hospital leadership anticipates the 2024-2027 Implementation Plan will include several focused efforts to address many of the identified needs, working with community partners and organizations and leveraging relevant LifeBridge Health resources.

Northwest Hospital will also support the work of Baltimore County agencies as well as the CHNA Steering Committee health systems and community organizations to address and advocate for solutions to additional identified needs not prioritized in its Implementation Plan.

Description of Community Served

Northwest Hospital's CHNA service area is represented by the blue and purple areas of the following map. It includes the following zip codes: 21117, 21133, 21244, 21207 and 21208.

Northwest Hospital Service Area



Demographic Highlights

The population of the Northwest Hospital service area has grown by 9.2% since 2010, while the population of Baltimore County as a whole has grown by only 4.9%.

Northwest’s service area has more than double the proportion of Black/African American residents compared to the county overall. The hospital service area population also skews more heavily female compared to Baltimore County as a whole and has slightly higher proportions of individuals ages 18 and under and 18 to 64.

Category	Northwest Service Area	Baltimore County, ACS 2022
Population	2010 Census: 205,888 2016 Census: 219,106 2019 Census: 218,526 2022 Census: 224,768	2022: 846,161
Gender	Female: 54.1% Male: 45.9%	Female: 52.4% Male: 47.6%
Race	Black/African American: 63.1% White: 25.8% Asian: 3.8% Multiple Races: 4.0%	Black/African American: 30.6% White: 52.9% Asian: 5.9% Multiple Races: 6.6%
Ethnicity	Hispanic/Latinx: 6.1%	Hispanic/Latinx: 6.6%
Age	Under 18: 22.0% 18 to 64: 61.1% 65 and Older: 16.8%	Under 18: 21.5% 18 to 64: 60.1% 65 and Older: 18.5%

Source: ESRI Business Analyst, 2023; ACS 1-year estimates, 2022

Key Findings and Analysis: Baltimore County

Secondary (existing) data collection included the analysis of over 100 data indicators at the county level. Data were collected from numerous sources, including:

- *County Health Rankings*, developed in partnership by Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute
- Maryland Department of Health’s *State Health Improvement Process* (MD SHIP) and Division of Vital Records
- The Maryland *Youth Risk Behavior Survey/Youth Tobacco Survey* (YRBS/YTS)
- *The Opportunity Atlas*, developed in partnership by the U.S. Census Bureau, Harvard University, and Brown University

- *The National Equity Atlas*, developed by PolicyLink and the University of Southern California (USC) Equity Research Institute
- *Food Access Research Atlas*, published by the U.S. Food and Drug Administration
- *Minority Health Social Vulnerability Index*, published by U.S. Department of Health and Human Services Office of Minority Health
- *American Community Survey*, as collected and published by the U.S. Census Bureau

Primary (new) data collected through the CHNA process included 115 key community health leader surveys, 2,034 community member surveys and 13 focus groups featuring more than 90 community stakeholders.

Recognizing that it's not possible to prioritize all possible areas of need in Baltimore County, the CHNA Steering Committee evaluated the relevant data gathered to determine which areas of focus had secondary data measures of high need or worsening performance, priorities from the primary data, and how possible it is for health departments or hospitals to impact the given need. The Steering Committee then used a polling software to identify three areas of highest priority need that health leaders should focus on for the next three-year period: Behavioral Health, Physical Health, and Access to Care (incorporating a focus on Social Determinants of Health).

Key Secondary Data Findings

Behavioral Health

Mental Health

- Percent of population who has been told they have a depressive disorder by a health professional (20.7% in Baltimore County; 16.6% in Maryland)
- Percent of population experiencing frequent mental distress (15% in Baltimore County; 13% in Maryland)
- Deaths attributed to suicide per 1,000 deaths (11 in Baltimore County; 10 in Maryland)

Substance Use Disorders

- Drug overdose deaths per 100,000 population (51.0 in Baltimore County; 41.0 in Maryland)
- Percent of adults who report drinking excessively (17% in Baltimore County; 15% in Maryland)
- Opioid prescriptions dispensed per 100 persons (41.7 in Baltimore County; 39.5 in Maryland)

Physical Health

Chronic Disease

- Percent of population experiencing frequent physical distress (7.7% in Baltimore County; 6.8% in Maryland)
- Age-adjusted death rate due to stroke per 100,000 population (47.1 in Baltimore County; 42.5 in Maryland)
- Age-adjusted death rate due to heart disease per 100,000 population (180.9 in Baltimore County; 163.3 in Maryland)
- Age-adjusted death rate due to cancer per 100,000 population (158.3 in Baltimore County; 145.5 in Maryland)

Health Behaviors

- Percent of adult population who smokes tobacco (13.8% in Baltimore County; 11.1% in Maryland)
- Percent of population who is physically inactive (25.0% in Baltimore County; 20.6% in Maryland)

Access to Care

- Rate of preventable hospital stays for ambulatory sensitive conditions, per 1,000 Medicare enrollees (30.1 in Baltimore County; 26.5 in Maryland)

Social Determinants of Health

Community Safety and Violence

- Firearm fatalities per 100,000 population (12.9 in Baltimore County, 12.3 in Maryland)
- Injury mortality per 100,000 population (109.4 in Baltimore County, 88.3 in Maryland)
- Juvenile arrests per 1,000 juveniles (38.9 in Baltimore County, 27.1 in Maryland)
- Domestic violence rate (number of domestic violence crimes divided by total population) (1,079.0 in Baltimore County, 568.6 in Maryland)

Food Security

- Percent of households experiencing food insecurity (10.3% in Baltimore County, 9.0% in Maryland)
- Percent of population with limited access to healthy foods (4.4% in Baltimore County, 3.6% in Maryland)

- Percent of children eligible for free or reduced lunch (52.0% in Baltimore County, 45.0% in Maryland)
- Percentage of households with children receiving public assistance (23.3% in Baltimore County, 21.2% in Maryland)

Income

- Median household income (\$82,607 in Baltimore County; \$93,432 in Maryland)
- Percent of ALICE¹ households (34.0% in Baltimore County; 29% in Maryland)

Transportation Options and Transit

- Average traffic volume per meter of major roadways (835.4 in Baltimore County; 695.2 in Maryland)
- Percent of the workforce that drives alone to work (75.1% in Baltimore County, 69.8% in Maryland)

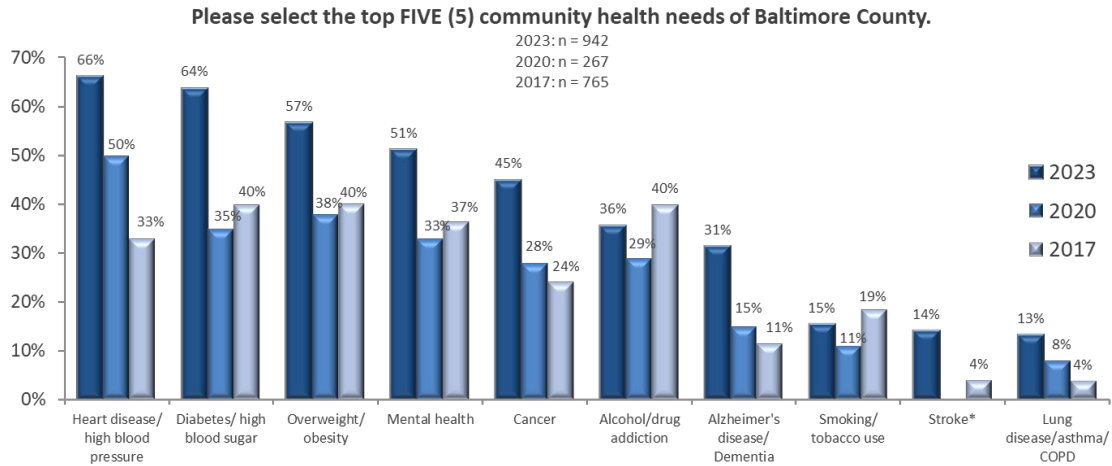
Community Survey: Northwest Hospital Service Area Trends

In 2023, nearly half (46.3%) of all respondents to the countywide community member web survey indicated that they lived in the Northwest Hospital service area.

When asked to identify the top community health needs impacting county residents, hospital service area residents identified heart disease/high blood pressure, diabetes/high blood sugar and overweight/obesity as the three most significant health concerns. These results were consistent with the top three needs identified by service area residents in the 2020 CHNA community member survey. In the 2017 survey, service area respondents ranked alcohol/drug addiction among the top three, along with diabetes/high blood sugar and overweight/obesity. Figure 1 outlines the top ten community health needs identified by service area residents in the 2017, 2020 and 2023 surveys.

¹ ALICE means [Asset Limited, Income Constrained, Employed](#). These are households earning above the Federal Poverty Level, but who struggle to meet their basic needs on a monthly basis.

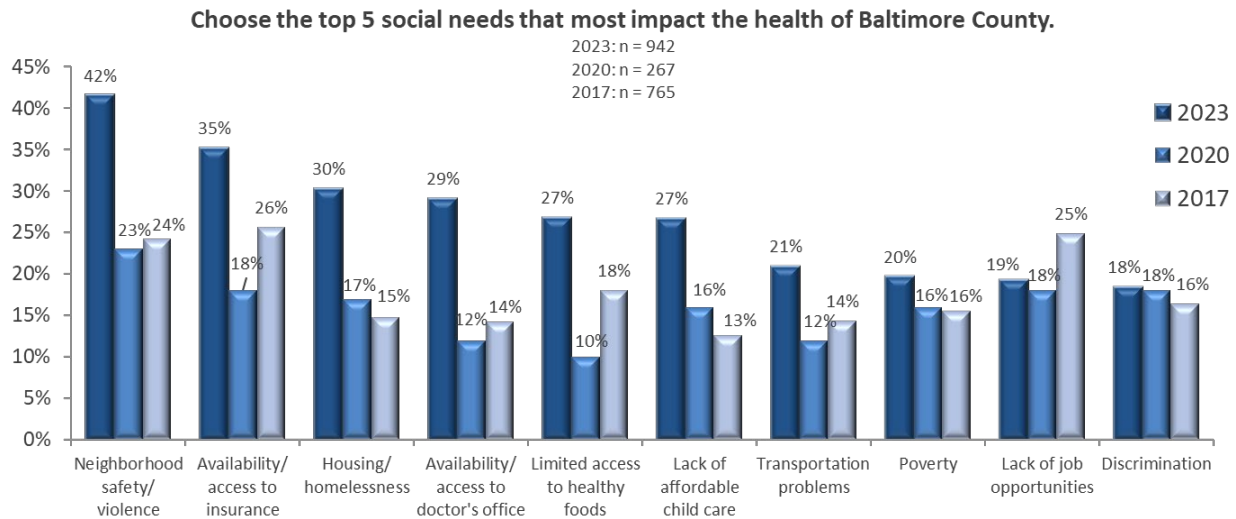
Figure 1: Top Health Needs – Northwest Service Area Residents



* Stroke was included with heart disease and high blood pressure in the 2020 survey.

When asked to select the most impactful social or environmental needs affecting their community, 2023 Northwest Hospital service area respondents identified neighborhood safety/violence, availability/access to insurance and housing/homelessness as the top three needs. While neighborhood safety/violence and availability/access to insurance were among the top concerns in the 2020 survey, service area survey respondents also highly ranked lack of job opportunities and discrimination. Results from the 2023 and 2020 surveys were relatively consistent with the 2017 survey, which ranked neighborhood safety/violence, availability/access to insurance and lack of job opportunities as the three most significant social or environmental needs. Figure 2 below outlines the top ten social or environmental needs identified by service area residents in the 2017, 2020 and 2023 surveys.

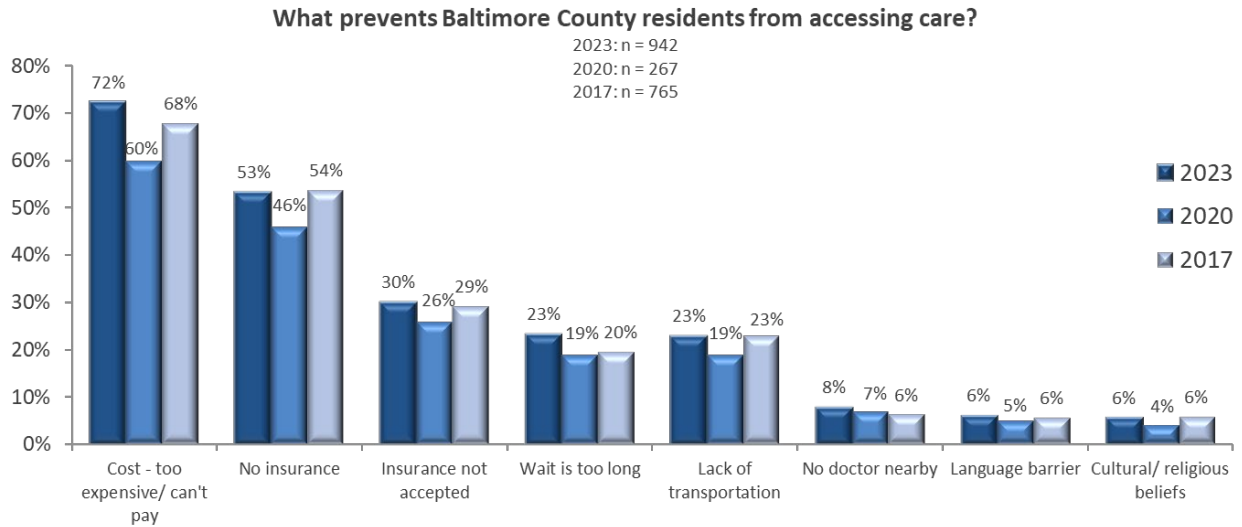
Figure 2: Top Social/Environmental Needs – Northwest Service Area Residents



Survey respondents were also asked to identify any barriers that prevent Baltimore County from accessing medical care when needed. The top three barriers to care were

consistent across the 2023, 2020 and 2017 surveys, as seen in Figure 3 below: the high cost of care, lack of health insurance and health insurance not being accepted.

Figure 3: Top Barriers to Care – Northwest Service Area Residents



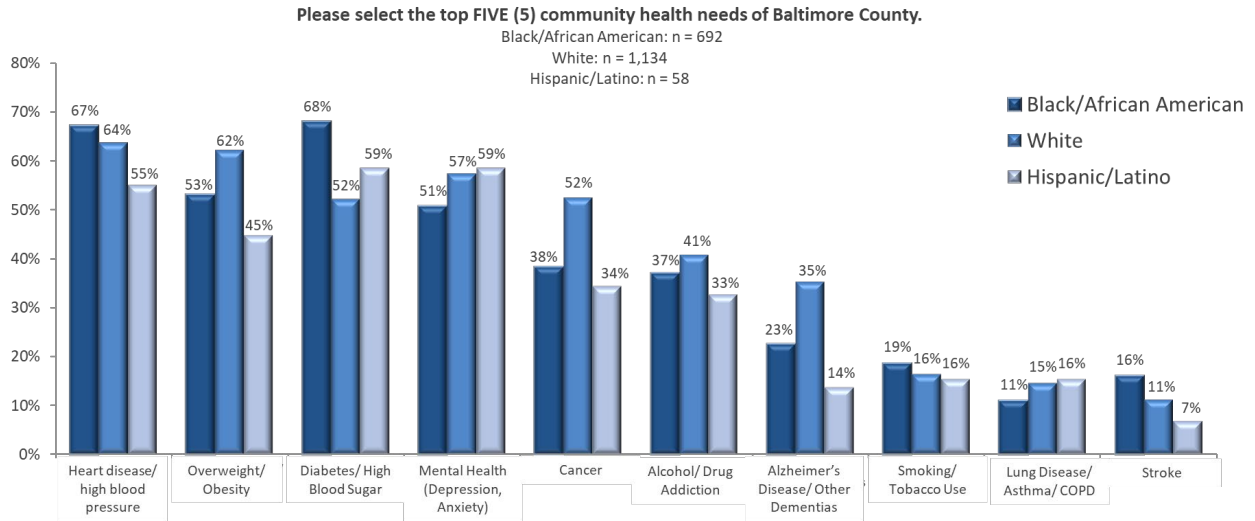
Community Survey: Baltimore County Health Disparities

Across Baltimore County, the community member web survey reflected various health and social disparities by race and ethnicity.

When asked to identify the top community health needs impacting county residents, more than two-thirds (68%) of Black or African American survey respondents selected diabetes/high blood sugar as the most impactful health concern. This was higher than the proportion of white (52%) or Hispanic or Latino respondents (59%) who selected this as a primary health need.

White survey respondents ranked overweight/obesity, cancer and Alzheimer's disease/other dementias higher compared to Black/African American or Hispanic/Latino survey respondents. Both white and Hispanic/Latino survey respondents ranked mental health (including depression and anxiety) as a more pressing health concern than Black or African American survey respondents. Figure 4 describes the top ten identified health concerns in Baltimore County by race and ethnicity.

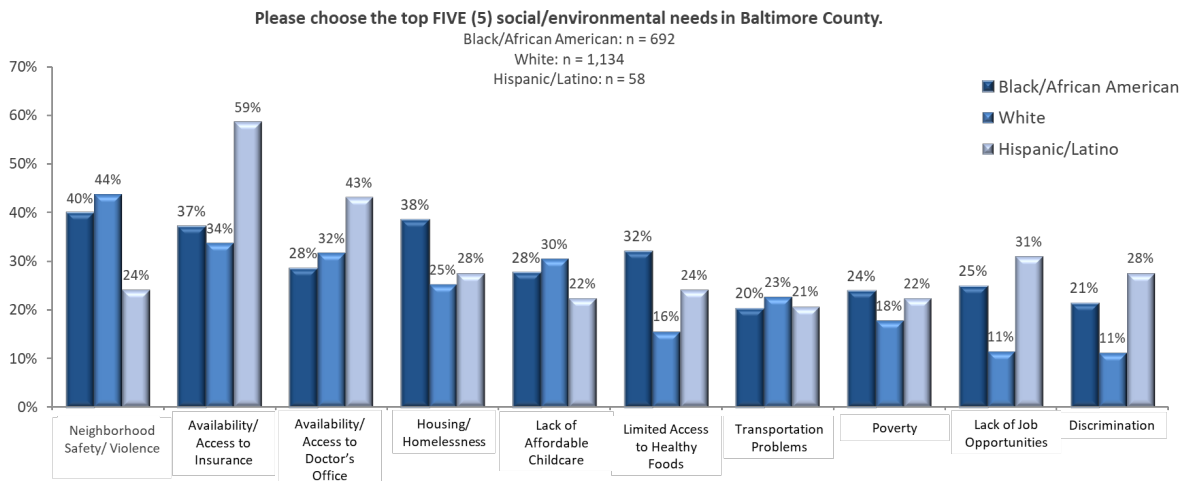
Figure 4: Top Health Needs by Race/Ethnicity – Baltimore County Residents



When survey participants asked about the most significant social or environmental needs impacting Baltimore County residents, Hispanic or Latino respondents were much more likely to have selected availability/access to health insurance, lack of job opportunities and discrimination, compared to Black/African American or white survey respondents.

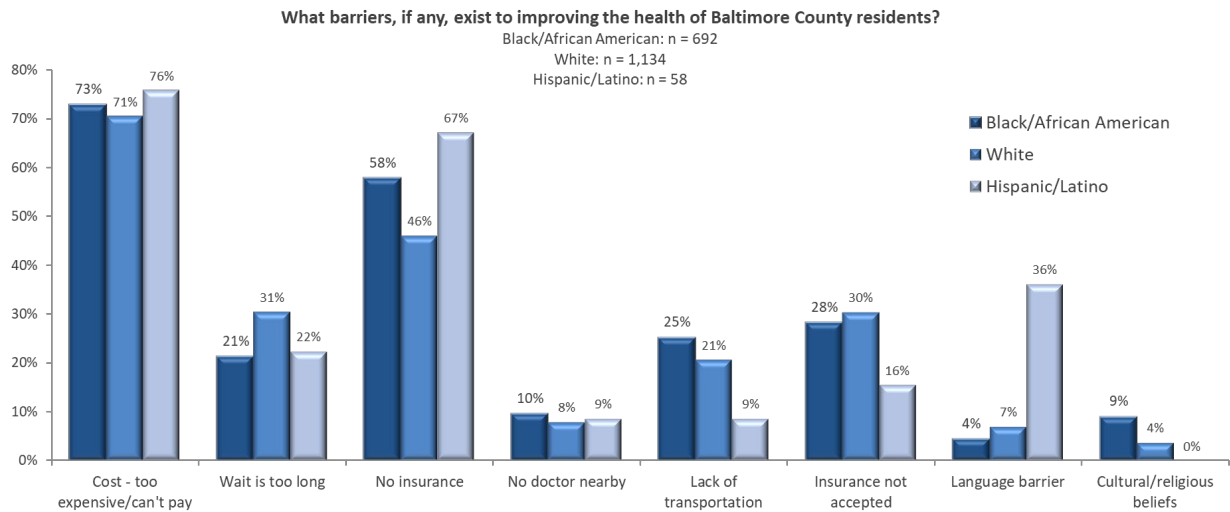
Both white and Black/African American survey participants ranked neighborhood safety/violence as the most impactful social or environmental concern, however Black/African American respondents ranked housing/homelessness and limited access to healthy foods higher than their white or Hispanic/Latino counterparts. White respondents ranked the lack of affordable childcare as more of a concern compared to respondents of another race or ethnicity. Figure 5 describes the top ten identified social or environmental concerns in Baltimore County by race and ethnicity.

Figure 5: Top Social/Environmental Needs by Race/Ethnicity – Baltimore County Residents



The top ranked barrier to accessing care in Baltimore County across all races or ethnicities was identified as the high cost of care, followed by lack of health insurance. Hispanic or Latino respondents ranked lack of health insurance and language barriers significantly higher than Black/African American or white respondents. Black/African American respondents were more likely to rank lack of transportation and cultural or religious beliefs as barriers to care than their white or Hispanic/Latino counterparts. Figure 6 describes the top barriers to improving health in Baltimore County by race and ethnicity.

Figure 6: Top Barriers to Care by Race/Ethnicity – Baltimore County Residents



Focus Groups

In addition to the web-based surveys and focus groups across Baltimore County, in October 2023, Northwest Hospital and its companion LifeBridge Health facilities conducted three focus groups within the hospital's primary service area. Participants included community members with various lived experiences, including individuals living with diabetes, parishioners from a local Baptist church, and representatives from the local Jewish Community Center.

Participants highlighted the following themes as top **health concerns**:

- Mental health and illness, including social isolation for older adults
- Chronic health conditions, including diabetes and heart disease
- Cancer

The leading **social and environmental barriers** referenced were:

- Food insecurity and access to affordable, healthy food
- Challenges related to transportation, such as unsafe public transit and insufficient mobility services for older adults or individuals with disabilities

- Community safety and violence

The top **reasons for not accessing healthcare** services included:

- Lack of healthcare providers in geographic areas throughout the county
- Difficulty navigating the healthcare system, particularly understanding health insurance benefits
- Long wait times for appointments, and at emergency rooms and urgent care sites
- Stigma and discrimination based on race/ethnicity or medical diagnosis
- Transportation and transit challenges

Impact of 2021-2024 Northwest Hospital Implementation Strategy

Northwest Hospital's 2021-2024 implementation plan addressed the following priority areas: chronic heart disease, diabetes, mental health and substance use disorders, community health and wellness education, health disparities, and workforce development.

To address these respective issues, LifeBridge and Northwest Hospital staff implemented virtual and in-person chronic disease management education classes, increased staff to expand reach into surrounding communities, provided staff to assist patients with navigating and applying for Medicaid health insurance, utilized Sinai Hospital of Baltimore's vocational services and workforce readiness program (VSP) for training and workforce development services, and created new partnerships and strengthened existing ones with community based organizations--including with local faith-based organizations--to improve access and trust for patients needing medical and behavioral health services.

Some examples of programs and services implemented in the Northwest service area supporting community health include:

- **SBIRT (Screening, Brief Intervention and Referral to Treatment) Program:** Peer recovery coaches stationed in the hospital's Emergency Department who connect substance use disorder patients with treatment and community resources. In FY23, Northwest Hospital provided over 8,000 screenings.
- **Cardiovascular Telemonitoring Program:** Remote patient monitoring program to improve the quality of care, patient outcomes, and reduce hospital utilization for patients with chronic diseases by improving patient-provider communication, improving coordination of care, and improving time of follow up with a Primary Care Provider. In FY23, Northwest enrolled 102 patients in the GetWell Loop Chronic Disease Management program.
- **Community Care Coordination:** Care management services provided to high-risk community members. This program includes collaboration with internal and external

mental health practices and referrals to community support resources. The initiative also coordinates transportation to medical appointments and social services. In FY23, this service provided 16,559 encounters.

- **Community Pastoral Outreach:** Community Pastoral Outreach provides supportive leadership with members of the faith community within Northwest's catchment area and beyond. This program assists congregations (all faiths) to develop health and wellness ministries; provides community pastoral care with participants of established programs; helps faith communities develop workshops, seminars, classes in relation to faith and health, along with specific health concerns; and engages in faith relations (e.g., with local governments, nonprofits, colleges and universities) throughout LifeBridge service areas.

Appendix: Baltimore County 2023-2024 CHNA



BALTIMORE COUNTY
COMMUNITY HEALTH
NEEDS ASSESSMENT



2023-2024



MedStar Health



ACKNOWLEDGEMENTS

This Community Health Needs Assessment (CHNA) represents the culmination of work completed by multiple individuals and groups. The Baltimore County Department of Health (BCDH) and local health systems including Northwest Hospital of LifeBridge Health, Greater Baltimore Medical Center Healthcare (GBMC), the University of Maryland St. Joseph Medical Center (UM SJMC), and MedStar Franklin Square Medical Center (MFSMC) have served an integral role in making this comprehensive assessment possible and will be referred to as the Steering Committee throughout this CHNA. The Steering Committee would like to extend its gratitude to all the focus groups participants, key community health leaders, and community members who provided information used in the development of this assessment.

The CHNA Steering Committee

Name	Title	Organization
D'Ambra Anderson	Population Health and Community Benefit Project Manager	GBMC
David Baker	Executive Director of Population and Community Health	LifeBridge Health
Rebecca Cohen	Community Health Nurse Manager	UM SJMC
Jill Brown Hong	Director of Community and Population Health	UM SJMC
Rosemary Burrell	Public Health Nurse Administrator – Population Health	BCDH
Terrie Dashiell	Director of Community Health and Wellness	LifeBridge Health
Phyllis Gray	Assistant Vice President – Care Transformation	MedStar Health
Tricia Isenock	Community Health Advisor	MedStar Health
Della Leister	Deputy Health Officer	BCDH
Sharon McClernan	Vice President – Population Health	LifeBridge Health
Karen Polite-Lamma	Program Manager – Population and Community Health	MedStar Health
Diana Quinn	Community Health Program Advisor	MedStar Health
Martin Raffel	Director of Continuing Care Services Data and Analytics	GBMC
Karen Thompkins	Director of Community Partnerships	GBMC
Athena Visilias	Senior Community Health Specialist	UM SJMC
Brenda Wolcott	Community Health System Manager	MedStar Health
Renee Youngfellow	PHN Bureau Director – Bureau of Clinical Services	BCDH

Ascendient Healthcare Advisors served as consultants, directing the CHNA process and developing the content of this report.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS 3

TABLE OF CONTENTS..... 4

EXECUTIVE SUMMARY 7

INTRODUCTION..... 9

 Background 9

 Process Overview..... 11

 Report Structure 12

 Summary Findings: Baltimore County Priority Health Need Areas 13

CHAPTER 1 | METHODOLOGY..... 15

 Study Design 15

 New (Primary) Data..... 15

 Existing (Secondary) Data 15

 Comparisons 16

 Prioritization Process Overview and Results..... 16

CHAPTER 2 | County Profile..... 21

 Geography..... 21

 Population..... 21

 Age and Sex Distribution..... 22

 Race and Ethnicity..... 22

 Economic Indicators..... 24

 Social Determinants of Health 26

 Disparities 27

 Social Vulnerability Index..... 30

 Health Outcome and Health Factor Rankings..... 32

CHAPTER 3 | PRIORITY NEED AREAS..... 34

 Priority Need: Behavioral Health 34

 Context and National Perspective 34

 Secondary Data Findings..... 35

 Primary Data Findings – Community Member Survey..... 37

Primary Data Findings – Key Leader Survey..... 38

Primary Data Findings – Focus Groups 39

Priority Need: Physical Health 39

 Context and National Perspective 39

 Secondary Data Findings..... 41

 Primary Data Findings – Community Member Survey..... 43

 Primary Data Findings – Key Leader Survey..... 43

 Primary Data Findings – Focus Groups 43

Priority Need: Access to Care..... 44

 Context and National Perspective 44

 Secondary Data Findings..... 47

 Primary Data Findings – Community Member Survey..... 50

 Primary Data Findings – Key Leader Survey..... 51

 Primary Data Findings – Focus Groups 53

CHAPTER 4 | HEALTH RESOURCE INVENTORY 56

 Health Resources 56

CHAPTER 5 | NEXT STEPS..... 59

APPENDICES 60

APPENDIX 1 | SUMMARY OF PRIOR CHNA IMPLEMENTATION PLANS 61

APPENDIX 2| COUNTY DEMOGRAPHIC AND SOCIOECONOMIC DETAIL 65

 County Demographics..... 65

 Age and Total Population..... 65

 Sex..... 65

 Race..... 66

 Ethnicity 67

 Socioeconomic Detail..... 67

APPENDIX 3 | SECONDARY DATA METHODOLOGY AND SOURCES 70

 Methodology..... 70

 Data Sources 71

APPENDIX 4 | SECONDARY DATA COMPARISONS 96

 Description of Focus Area Comparisons 96

Detailed Focus Area Benchmarks 97

APPENDIX 5 | SECONDARY DATA SUMMARY 105

APPENDIX 6 | DETAILED PRIMARY DATA FINDINGS 106

 Methodologies 106

 Focus Groups..... 106

 Key Leader Web Survey 109

 Community Survey..... 121

APPENDIX 7 | PRIMARY DATA SUMMARY 130

EXECUTIVE SUMMARY

A Community Health Needs Assessment (CHNA) helps health leaders evaluate the health and wellness of the community they serve and identify gaps and challenges that should be addressed through new programs, services and policy changes. This report was created in compliance with the Public Health Accreditation Board's Standards & Measures for Initial Accreditation, Version 2022, as well as Internal Revenue Service requirements for not-for-profit hospitals.

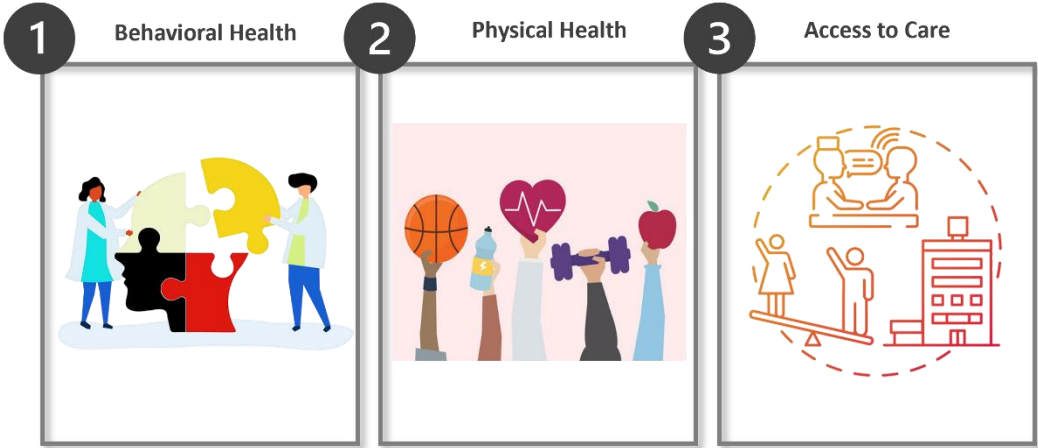
Several local health organizations came together as the CHNA Steering Committee to help develop this CHNA, including:

- Baltimore County Department of Health
- Greater Baltimore Medical Center Healthcare
- MedStar Franklin Square Medical Center
- Northwest Hospital of LifeBridge Health
- University of Maryland St. Joseph Medical Center

Secondary (existing) data is an important piece of the CHNA process. More than 100 data indicators were chosen for analysis from data sources like the Robert Wood Johnson Foundation County Health Rankings, the University of North Carolina Health Literacy Data Map, and the Centers for Disease Control and Prevention. Secondary data measures were gathered into six categories and 20 detailed sub-categories based on common themes. Each data measure was also compared to state or national benchmarks to identify areas of specific concern for Baltimore County. Top community needs identified through secondary data analysis included social determinants of health, access to healthcare, behavioral health and health equity.

Primary (new) data were collected through community-based focus groups and web-based surveys for community members and key community leaders, and included feedback from more than 2,200 people who live, work or receive healthcare in Baltimore County. Key leaders most frequently represented nonprofit organizations, but participants also included government, health, and faith leaders among others. A total of 13 focus groups were conducted, either virtually or in person, with a variety of community members from different backgrounds, age groups and life experiences. Primary data identified access to healthcare, food insecurity, and transportation as top needs that impact the health and well-being of people living in Baltimore County.

The CHNA Steering Committee worked together to identify the priorities the county should focus on over the following three-year period. Leaders evaluated the primary and secondary data collected throughout the process to identify needs based on the size and scope, severity, the ability for hospitals or health departments to make an impact, associated health disparities, and importance to the community. Although it was not possible for every single area of potential need to be identified as a priority, the CHNA Steering Committee selected three top priority health needs (behavioral health, physical health and access to care), which are shown here in no particular order:



The Steering Committee compiled a Health Resources Inventory, which describes a variety of resources available to help Baltimore County residents meet their health and social needs.

Following completion of this report, health leaders throughout Baltimore County will use its findings to collaborate with community organizations and local residents to develop effective health strategies, new implementation plans and interventions, and action plans to improve the communities they serve.

INTRODUCTION

Background

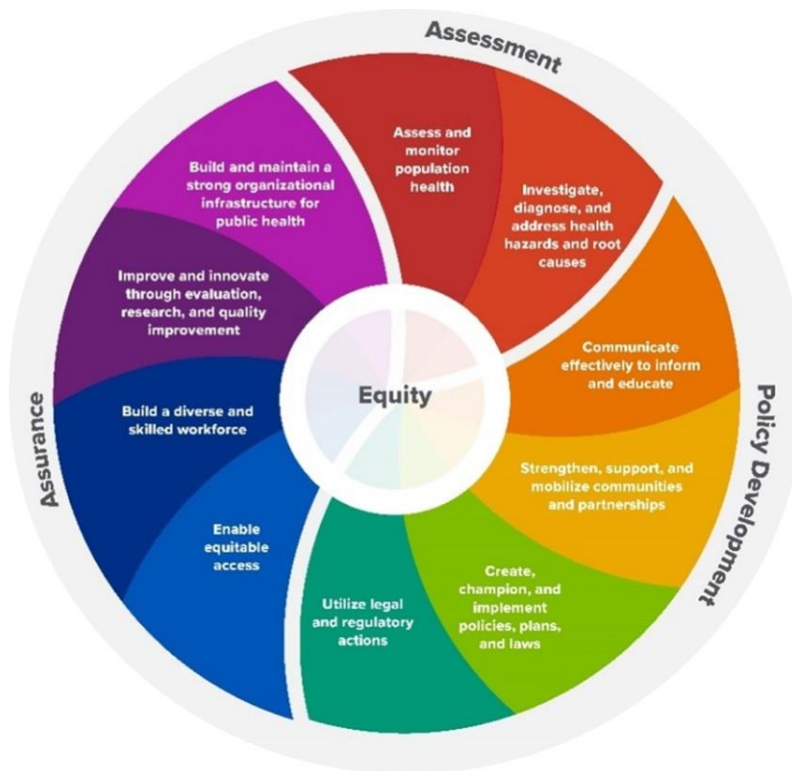
To illustrate its commitment to the health and well-being of the community, the Baltimore County CHNA Steering Committee has completed this assessment to understand and document the greatest health needs currently faced by local residents. The Committee included representatives from Baltimore County Department of Health (BCDH), Northwest Hospital of LifeBridge Health (Northwest), Greater Baltimore Medical Center HealthCare (GBMC), University of Maryland St. Joseph Medical Center (UM SJMC), and MedStar Health (MedStar) (on behalf of MedStar Franklin Square Medical Center (MFSMC)). These organizations helped gather the focus group and survey data that are detailed in this report. The CHNA process helps local leaders continuously evaluate how best to improve and promote the health of the community. The CHNA builds upon formal collaborations between the Steering Committee and other community partners to proactively identify and respond to the needs of Baltimore County residents.

This report was created in compliance with the Public Health Accreditation Board (PHAB)'s Standards & Measures for Initial Accreditation, Version 2022. The Standards "provide requirements and guidance for public health departments"¹ and are based on ensuring public health departments adhere their standards to the CDC's "10 Essential Public Health Services" framework. In its demonstration of data and prioritization of Baltimore County's community needs, this report aligns with all PHAB Standards and Measures for Initial Accreditation, including the need to:

- Conduct and disseminate assessments focused on population health status and public health issues facing the community;
- Participate in or conduct a collaborative process resulting in a comprehensive community health assessment;
- Collect and maintain reliable, comparable, and valid data that provide information on conditions of public health importance and on the health status of the population;
- Analyze public health data to identify trends in health problems, environmental public health hazards, and social and economic factors that affect the public's health;
- Describe disparities in health status and health behaviors, as well as inequities in the factors that contribute to health challenges; and
- Provide and use the results of health data analysis to develop recommendations regarding public health policy, processes, programs, or interventions.

¹ Source: Public Health Accreditation Board, Centers for Disease Control and Prevention (2022). *Standards & Measures for Initial Accreditation*. Retrieved September 27, 2022, from <https://phaboard.org/wp-content/uploads/Standards-Measures-Initial-Accreditation-Version-2022.pdf>

Figure 1.1: The 10 Essential Public Health Services



Further, this process complies with Internal Revenue Service (IRS) requirements for not-for-profit hospitals to complete a CHNA every three years and to adopt an implementation strategy to meet CHNA-identified community health needs.² Specifically, the IRS requires that hospital facilities do the following:

- Define the community it serves;
- Assess the health needs of that community;
- Through the assessment process, take into account input received from people who represent the community's broad interests, including those with special knowledge of or expertise in public health;
- Document the CHNA in a written report that is reviewed and adopted by the hospital facility's authorizing body; and
- Make the CHNA widely available to the public.

² Source: *Community Health Needs Assessment for Charitable Hospital Organizations – Section 501^c(3)* (2023). Internal Revenue Service. Retrieved February 13th, 2024 from <https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3>.

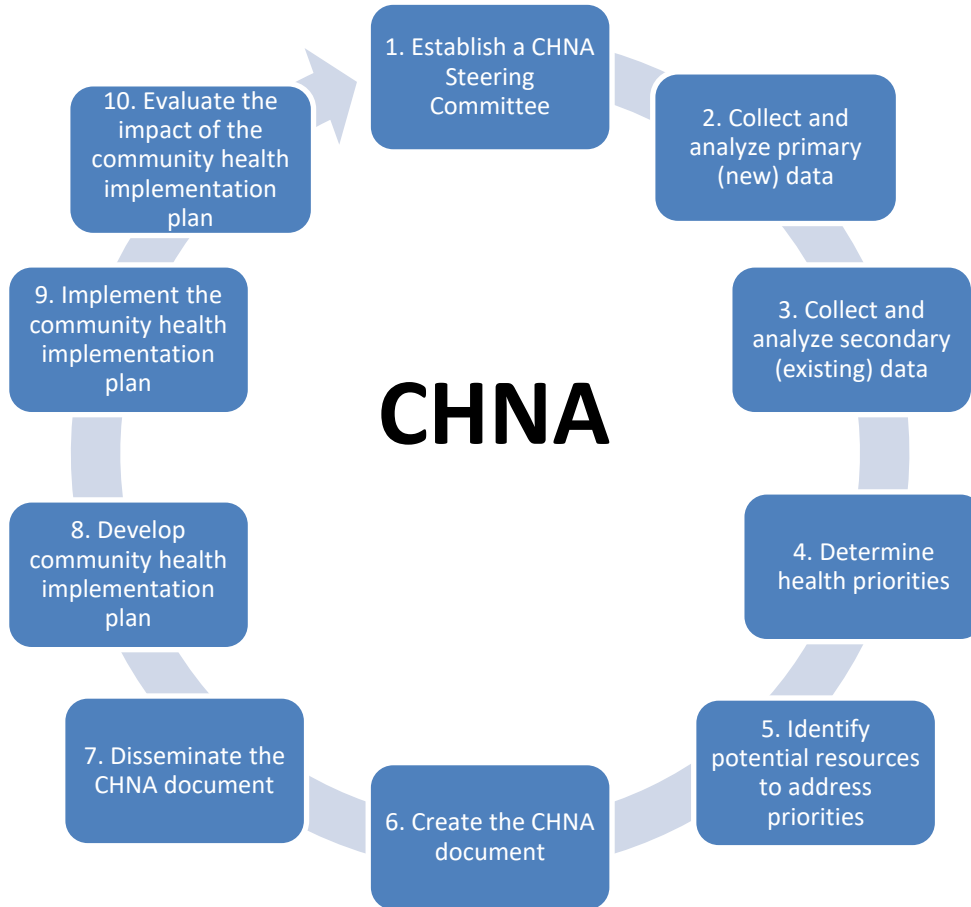
Process Overview

A significant amount of information has been reviewed during this planning process, and the CHNA Steering Committee has been careful to ensure that a variety of sources were used to deliver a truly comprehensive report. Both existing (secondary) data and new (primary) data were collected directly from the community throughout this process. It is also important to note that, although unique to Baltimore County, the sources and methodologies used to develop this report comply with the current PHAB and IRS requirements for health departments and not-for-profit hospital organizations.

The purpose of this study is to better understand, quantify, and articulate the health needs of Baltimore County residents. Key objectives of this CHNA include:

- Identify the health needs of Baltimore County residents.
- Identify disparities in health status and health behaviors, as well as inequities in the factors that contribute to health challenges.
- Understand the challenges residents face when trying to maintain and/or improve their health.
- Understand where underserved populations turn for services needed to maintain and/or improve their health.
- Understand what is needed to help residents maintain and/or improve their health.
- Prioritize the needs of the community and clarify/focus on the highest priorities.

There are ten phases in the CHNA process, as described in Figure 1.2 below. Results of the first seven phases are discussed throughout this assessment and the development of community health action plans and subsequent phases will take place after the completion of the CHNA report.

Figure 1.2: The CHNA Process

Report Structure

The outline below provides detailed information about each section of the report.

- 1) [Methodology](#) – The methodology chapter provides an overall summary of how the priority health need areas were selected as well as how information was collected and incorporated into the development of this CHNA, including study limitations.
- 2) [County Profile](#) – This chapter details the demographic (such as age, gender, and race) and socioeconomic data of Baltimore County residents.
- 3) [Priority Health Need Areas](#) – This chapter describes each identified priority health need area for Baltimore County and summarizes the new and existing data that support these prioritizations. This chapter also describes the impact of health disparities among various sub-groups in Baltimore County.
- 4) [Health Resource Inventory](#) – This chapter documents existing health resources currently available to the Baltimore County community.

- 5) [Next Steps](#) – This chapter briefly summarizes the next steps that will occur to address the priority health need areas discussed throughout this document.

In addition, the appendices discuss all of the data used during the development of this report in detail, including:

- 1) [Summary of Prior CHNA Implementation Plans](#) – Information about Steering Committee partners and actions taken to address the priority health needs identified in previous CHNAs are presented in Appendix 1.
- 2) [County Demographic and Socioeconomic Data](#) – Information regarding the population characteristics (such as age, gender, and race) of Baltimore County are presented in Appendix 2.
- 3) [Detailed Summary of Secondary Data Measures and Findings](#) – Existing data measures and findings used in the prioritization process are presented in Appendices 3-5.
- 4) [Detailed Summary of Primary Findings](#) – Summaries of new data findings from community member and key community health leader surveys as well as focus groups are presented in Appendices 6-7.

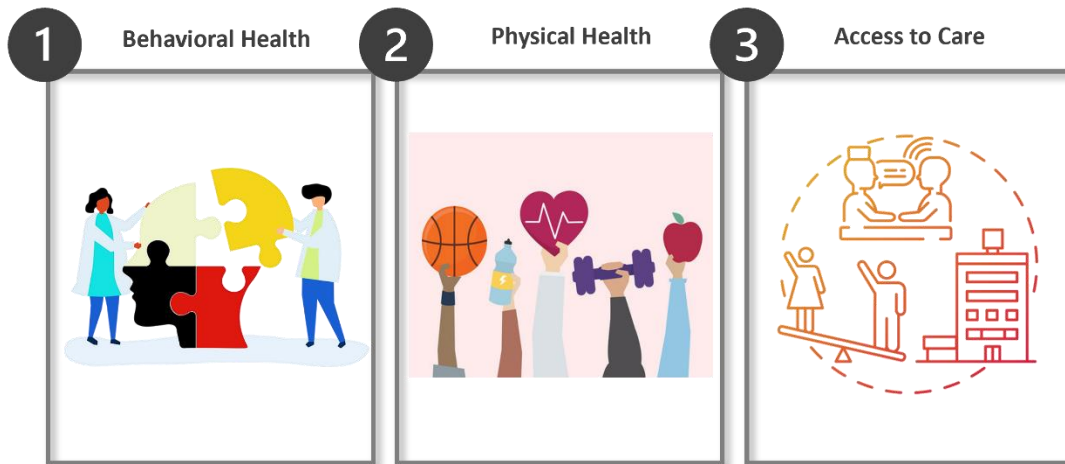
Summary Findings: Baltimore County Priority Health Need Areas

To achieve the study objectives, both new and existing data were collected and reviewed. New data included information from web-based surveys of adults (18+ years) and focus groups; various local organizations, community members, and health service providers within Baltimore County participated. Existing data included information regarding the demographics, health and healthcare resources, behavioral health, disease trends, and county rankings. The data collection and analysis process began in July 2023 and continued through March 2024.

Given the size of Baltimore County, both in geography and population, significant variations in demographics and health needs exist within the county. At the same time, consistent needs are present across the whole county and serve as the basis for determining priority health needs at the county level. This document will discuss the priority health need areas for Baltimore County, as well as how the severity of those needs might vary across subpopulations based on the information obtained and analyzed during this process.

Through the prioritization process, the CHNA Steering Committee identified Baltimore County’s priority health need areas from a list of over 100 health indicators. Please note that the final priority needs were not ranked in any order of importance and the Steering Committee and the Local Health Improvement Coalition (LHIC) will engage in each of the three priority need areas. After looking at all relevant data and feedback from the CHNA Steering Committee, the three focus areas identified as countywide priorities for the 2023-2024 CHNA are behavioral health, physical health and access to care, as seen in Figure 1.3.

Figure 1.3: Priority Health Needs, 2023-2024



Health, healthcare and associated community needs are very much interrelated, and often impact each other. Although this CHNA process considered these areas separately, their impact on each other should be considered when planning for programs or services to address community needs.

Many health needs are also related to underlying societal and socioeconomic factors. Research has consistently shown that income, education, physical environment, and other such demographic and socioeconomic factors affect the health status of individuals and communities. This CHNA acknowledges that link and focuses on identifying and documenting the greatest health needs as they present themselves today. As plans are developed to address these needs, the Committee’s goal is to work with other community organizations to address underlying factors that could drive long-term improvements to the county population’s health.

For additional discussion of current priority needs and the data that supports those priorities, please see Chapter 3.

CHAPTER 1 | METHODOLOGY

Study Design

The process used to assess Baltimore County’s community needs, challenges, and opportunities included multiple steps. Both new and existing data were used throughout the study to paint a more complete picture of Baltimore County’s health needs. While the CHNA Steering Committee largely viewed the new and existing data equally, there were situations where one provided clearer evidence of community health need than the other. In these instances, the health needs identified were discussed based on the most appropriate data gathered. Data analysis, community feedback review, and stakeholder engagement were all used to identify key areas of need.

Specifically, the following data types were collected and analyzed:

New (Primary) Data

Public engagement and feedback were received through online community member and key community leader surveys, along with community focus groups and significant input and direction from the CHNA Steering Committee. The Steering Committee worked together to develop the survey questions for the two web-based surveys. Community members were asked to identify the most significant health and social needs in their community, as well as asked questions about their experiences seeking or receiving medical care. Key leaders were asked to answer similar questions about the community they serve. Focus group participants were also asked a standard set of questions about health and social needs, in order to identify trends across various groups and to highlight areas of concern for specific populations. In total, the Steering Committee was able to gather input from over 2,200 Baltimore County residents and other stakeholders. This included web survey responses from 2,034 community members and 115 key leaders, as well as 13 focus groups that included over 90 community members and other people who live, work or receive healthcare in Baltimore County.

For more information regarding specific questions asked as part of the focus groups and surveys, please refer to Appendix 6.

Existing (Secondary) Data

Key sources for existing data on Baltimore County included information provided by the Steering Committee and a variety of public data sources related to demographics, social and economic determinants of health, environmental health, health status and disease trends, mental/behavioral health trends, and individual health behaviors. Key information sources leveraged during this process included:

- *County Health Rankings*, developed in partnership by Robert Wood Johnson Foundation and University of Wisconsin Population Health Institute
- Maryland Department of Health’s State Health Improvement Process (MD SHIP) and Division of Vital Records
- The Maryland Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS)

- *The Opportunity Atlas*, developed in partnership by the U.S. Census Bureau, Harvard University, and Brown University
- *The National Equity Atlas*, developed by PolicyLink and the University of Southern California (USC) Equity Research Institute
- *Food Access Research Atlas*, published by the U.S. Food and Drug Administration
- *Minority Health Social Vulnerability Index*, published by U.S. Department of Health and Human Services Office of Minority Health
- *American Community Survey*, as collected and published by the U.S. Census Bureau
- Data provided by CHNA Steering Committee members and other affiliated organizations, including CHNA reports from BCDH, Northwest, Sheppard Pratt, GBMC, UM SJMC, and MFSMC.

For more information regarding data sources and data time periods, please refer to Appendix 4.

Comparisons

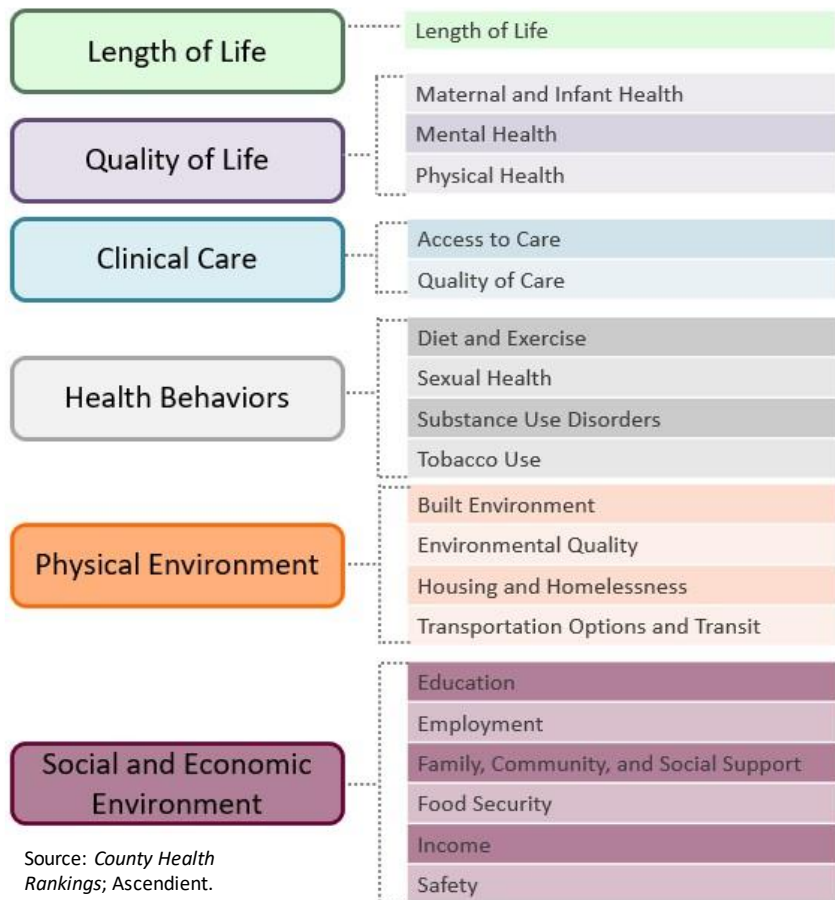
To understand the relevance of existing data collected throughout the process, each measure must be compared to a benchmark, goal, or similar geographic area. In other words, without being able to compare Baltimore County to an outside measure, it would be impossible to determine how the county is performing. For this process, each data measure was compared to outside data as available, including the following:

- *County Health Rankings Top Performers*: This is a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute that ranks counties across the nation by various health factors.
- *City of Baltimore and State of Maryland*: The Steering Committee determined that comparisons with the City of Baltimore and the state of Maryland were appropriate. While certain differences exist between the county and the city, the close proximity and overlap between resources creates a meaningful opportunity for comparison.

Prioritization Process Overview and Results

The process of identifying the priority health needs for the 2023-2024 CHNA began with the collection and analysis of hundreds of new and existing data measures. In order to create more easily discussable categories, all individual data measures were then grouped into six categories and 20 corresponding focus areas based on “common themes,” as seen in Figure 2.1 below. These focus areas are detailed further in Appendix 4.

Figure 2.1: Areas of Focus

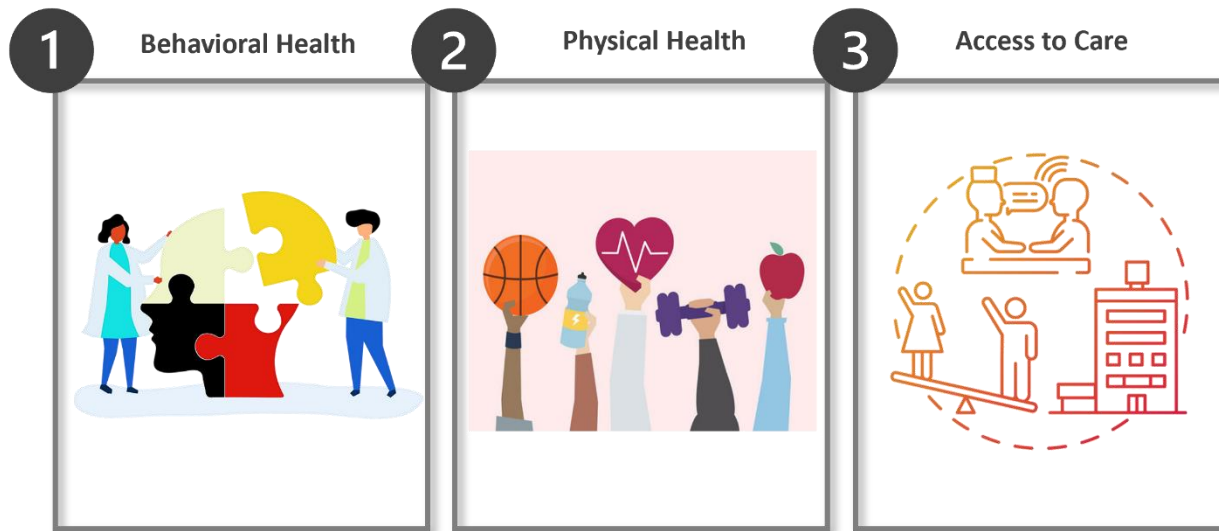


Since a large number of individual data measures were collected and analyzed to develop these 20 focus areas, it was not reasonable to make each of them a priority. The Steering Committee considered which focus areas had data measures of high need or worsening performance, priorities from the primary data, and how possible it is for health departments or hospitals to impact the given need to help determine which health needs should be prioritized. Once the primary and secondary data had been grouped into the focus areas detailed in Appendix 4, the CHNA Steering Committee used a polling software to evaluate and prioritize the health needs of Baltimore County while considering the following factors:

- Size and scope of the health need;
- Severity and intensity of the health need;
- Whether possible interventions would be possible and effective;
- Health disparities associated with the need; and
- Importance the community places on addressing the need.

The final priority need areas were not ranked in any particular order of importance, and each will be addressed by the Steering Committee. The following three focus areas (behavioral health, physical health and access to care) were identified as Baltimore County’s top priority health needs to be addressed over the next three years, as seen in Figure 2.2 below:

Figure 2.2: Priority Health Needs, 2023-2024



Throughout the process, the Steering Committee also considered *Healthy People 2030*’s “Social Determinants of Health and Health Equity.” The CDC defines social determinants of health (SDoH) as the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality of life outcomes and risks. These factors can include healthcare access and quality, neighborhood and built environment, social and community context, economic stability, and education access and quality, as outlined in Figure 2.3.³

Recognizing that SDoH have an impact on health disparities and inequities in the community was a key point the Steering Committee considered throughout the CHNA process. Figure 2.4 describes the way various social and economic conditions may affect health and well-being.

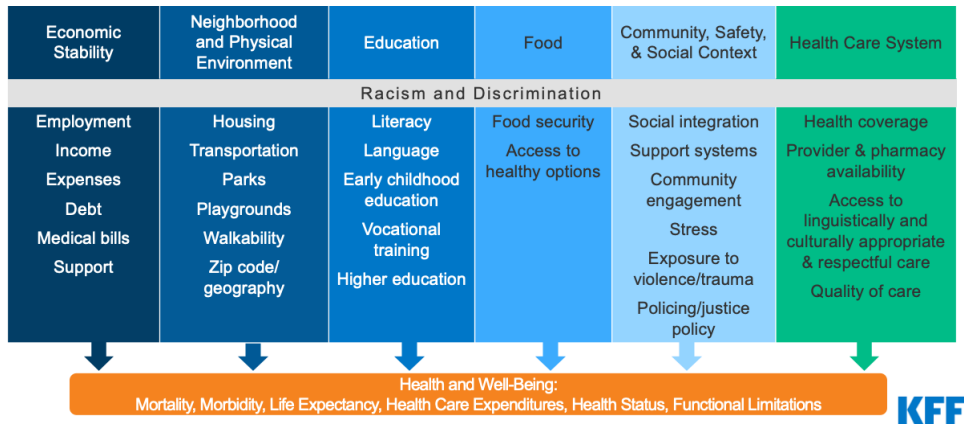
Figure 2.3: Social Determinants of Health



³ Source: CDC (2022). Social Determinants of Health at CDC. Accessed March 7th, 2024 via <https://www.cdc.gov/about/sdoh/index.html>

Figure 2.4: SDoH and Health Disparities

Health Disparities are Driven by Social and Economic Inequities



Study Limitations

Developing a CHNA is a long and time-consuming process. Because of this, more recent data may have been made available after the collection and analysis timeframe. Existing data typically become available between one and three years after the data is collected. This is a limitation, because the “staleness” of certain data may not depict current trends. For example, the U.S. Census Bureau’s American Community Survey is a valuable source of demographic information, however data for a particular year is not published until late the following year. This means 2022 data on community characteristics, such as languages spoken at home, did not become available until late fall 2023. The Steering Committee tried to account for these limitations by collecting new data, including focus groups and web-based community member and key community leader surveys. Another limitation of existing data is that, depending on the source, it may have limited demographic information, such as gender, age, race, and ethnicity.

Given the size of Baltimore County in both population and geography, this study was limited in its ability to fully capture health disparities and health needs across racial and ethnic groups. While efforts were made to include diverse community members in survey efforts, roughly 60% of all respondents were white, and another 36% of respondents were Black or African American. Although survey respondents could choose from multiple race or ethnicity categories,⁴ limited responses were received from these groups. This made it difficult for the Steering Committee to assess health needs and disparities for other racial/ethnic minority groups in the community.

In addition, there are existing gaps in information for some population groups. Many available datasets are not able to isolate historically underserved populations, including the uninsured, low-income persons, and/or certain minority groups. Despite the lack of available data, attempts were made to include underserved sub-segments of the greater population through the new data gathered throughout the CHNA process. For example, the Steering Committee chose to focus on Spanish-speaking members of the community by providing a Spanish language version of the web-based community survey and facilitating

⁴ Categories included Asian, American Indian/Alaskan Native (AIAN), Black or African American, Hispanic/Latino, Native Hawaiian/Other Pacific Islander (NHPI) and White.

Spanish-language focus groups. Paper surveys were also distributed in an effort to reach as much of the community as possible, although usage of paper surveys was low. To increase future survey responses, members of the Steering Committee should consider working directly with partner organizations in the community who can connect directly with populations who are hard to access through traditional outreach methods, including people with disabilities, the uninsured and people who are disengaged.

In the future, assessments should make efforts to include other underserved communities whose needs are not specifically discussed here because of data and input limitations during this CHNA cycle. Of note, residents in the disabled, blind, deaf, and hard-of-hearing communities can be a focus of future new data collection methods. Using a primarily web-based survey collection method might have also impacted response rates of community members with no internet access or low technological literacy. Additionally, more input from both patients and providers of SUD services would also be helpful in future assessments.

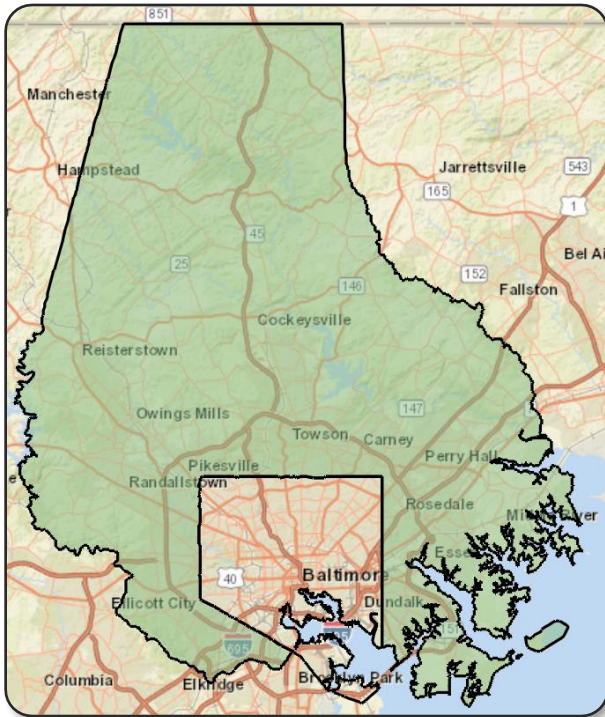
Finally, parts of this assessment have relied on input from community members and key community health leaders through web-based surveys and focus groups. Since it would be unrealistic to gather input from every single member of the community, the community members that participated have offered their best expertise and understanding on behalf of the entire community. As such, the CHNA Steering Committee has assumed that participating community members accurately and completely represented their fellow residents.

CHAPTER 2 | COUNTY PROFILE

Geography

Baltimore County occupies 612 square miles of land — plus an additional 28 square miles of water — in the geographic center of Maryland. Baltimore County surrounds most of Baltimore City, however, the city was separated from the county in 1851. Today, Baltimore City is an independent city on par with county jurisdictions.

Figure 3.1: Baltimore County Map



Population

Population figures discussed throughout this chapter were obtained from Esri, a leading GIS provider that utilizes U.S. Census data projected forward using proprietary methodologies.

With a population of roughly 860,000 people, the county is the largest jurisdiction in the Central Maryland Metropolitan Area.

Table 3.1: 2023 Total Population				
	Baltimore County	Baltimore City	Maryland	United States
Population	859,710	573,794	6,259,408	337,470,185

Source: Esri 2023

Age and Sex Distribution

Data on age and sex helps health providers understand who lives in the community and informs planning for needed health services. The age distribution of Baltimore County skews slightly older than that of Baltimore City, Maryland, and the U.S. While people of all ages can benefit from preventive services and health education, older people may need higher acuity healthcare and specialized services like cancer care or chronic disease management.

Table 3.2: 2023 Age Distribution				
	Baltimore County	Baltimore City	Maryland	United States
Percentage below 15	16.4%	16.8%	17.6%	18.0%
Percentage between 15 and 44	38.9%	43.7%	39.2%	39.6%
Percentage between 45 and 64	24.9%	23.0%	25.7%	24.6%
Percentage 65 and older	19.7%	16.5%	17.5%	17.8%

Source: Esri 2023

The populations of Baltimore County and Baltimore City skew more heavily female compared to the state of Maryland, and the U.S.

Table 3.3 2023 Sex Distribution				
	Baltimore County	Baltimore City	Maryland	United States
Female	52.2%	52.8%	51.3%	50.6%
Male	47.8%	47.2%	48.7%	49.4%

Source: Esri 2023

Race and Ethnicity

Data on race and ethnicity help us understand the need for healthcare services as well as cultural factors that can impact how care is delivered. A greater proportion of residents in Baltimore County identify as Black or African American compared to the U.S. overall. However, the proportion of county residents that identify as Black or African American is roughly half the proportion of the city.

Table 3.4: 2023 Racial Distribution

	Baltimore County		Baltimore City		Maryland		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Non-Hispanic White	431,552	50.2%	146,924	25.6%	2,867,623	45.8%	191,314,266	56.7%
Non-Hispanic Black	260,766	30.3%	332,377	57.9%	1,834,049	29.3%	40,898,542	12.1%
Asian	57,506	6.7%	21,210	3.7%	439,514	7.0%	20,811,620	6.2%
AIAN	1,921	0.2%	1,270	0.2%	11,977	0.2%	2,284,715	0.7%
NHPI	255	0.0%	152	0.0%	2,635	0.0%	643,202	0.2%

Source: Esri 2023

By ethnicity, less than 10% of Baltimore County's population is Hispanic.⁵ Baltimore County has a smaller Hispanic population than Baltimore City, Maryland, and the U.S. overall.

Table 3.5: 2023 Ethnic Distribution

	Baltimore County		Baltimore City		Maryland		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Non-Hispanic	793,133	92.3%	525,925	91.7%	5,470,733	87.4%	271,934,049	80.6%
Hispanic	66,577	7.7%	47,869	8.3%	788,675	12.6%	65,536,136	19.4%

Source: Esri 2023

The proportion of foreign-born individuals residing in Baltimore County is higher than that of Baltimore City but lower than that of the state of Maryland. This measure is also slightly lower than the U.S. overall.

Table 3.6: 2022 Foreign Born Population

	Baltimore County	Baltimore City	Maryland	United States
Foreign Born	13.0%	9.7%	16.7%	13.9%

Source: U.S. Census Bureau (2022), American Community Survey (2018-2022)

The diversity of Baltimore County and Baltimore City is reflected in the languages that residents speak at home. According to the most recent American Community Survey, approximately 15% of Baltimore County and 10% of Baltimore City residents speak a language other than English at home, compared to around 20% of Maryland and U.S. residents. Less than 5% of county or city residents speak Spanish at home. Spanish is more commonly spoken at home in the state of Maryland and the U.S. overall.

⁵ Race and ethnicity (Hispanic origin) are two separate concepts, according to federal guidelines. People who are Hispanic may be of any race, and people in each race group may be either Hispanic or Not Hispanic. Source: [U.S. Census Bureau Guidance on the Presentation and Comparison of Race and Hispanic Origin Data](#).

Table 3.7: 2022 Language Spoken at Home

	Baltimore County	Baltimore City	Maryland	United States
English Only	85.8%	89.0%	79.3%	78.0%
Spanish	4.0%	4.7%	8.9%	13.3%
Indo-European Languages	4.5%	2.5%	4.7%	3.8%
Asian and Pacific Islander Languages	2.7%	1.9%	3.9%	3.6%
Other Languages	3.0%	1.8%	3.2%	1.2%

Source: American Community Survey 2022 1-Year Estimates

Economic Indicators

In addition to demographic data, socioeconomic factors in the community such as income, poverty, and food scarcity play a significant role in identifying health-related needs. The median household income in Baltimore County is higher than in Baltimore City and the U.S. overall, but lower than Maryland.

Table 3.8: 2023 Median Household Income

	Baltimore County	Baltimore City	Maryland	United States
Income	\$82,607	\$55,224	\$93,432	\$72,603

Source: Esri 2023

In 2021, approximately 10% of Baltimore County households were below the federal poverty level (FPL). The share of households below the FPL was higher in Baltimore City and the U.S. overall but equal to the state of Maryland. Poverty has a significant impact on health. Across the lifespan, people who live in impoverished communities have a higher risk of poor health outcomes, including mental illness, chronic diseases, higher mortality and lower life expectancy. Poverty is a concern across the lifespan; children who live in poverty are at risk for developmental delays, toxic stress and poor nutrition, and are likely to live in poverty as adults as well. Unmet social needs, including having low or no income, can also limit people's ability to access healthcare when they need it, or to provide for basic necessities needed to live healthy lives, such as safe housing or healthy food.⁶

Table 3.9: 2021 Percent of Households Below the Federal Poverty Level

	Baltimore County	Baltimore City	Maryland	United States
Percent Below FPL	9.1%	19.6%	9.1%	12.4%

Source: Esri 2023

⁶ Source: Healthy People 2030 (2023). *Poverty*. Accessed March 7th, 2024 via: <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/poverty>

Similar to the percentage of households below the FPL, approximately 10% of Baltimore County households received Food Stamps/SNAP⁷ in 2021. This percentage was comparable with the state of Maryland and the United States but significantly less than Baltimore City.

	Baltimore County	Baltimore City	Maryland	United States
Number of Households Receiving Food Stamps/SNAP	34,031	56,208	238,288	14,105,231
Total Number of Households	326,932	244,893	2,294,270	124,010,992
Percentage of Households receiving Food Stamps/SNAP	10.4%	23.0%	10.4%	11.4%

Source: Esri 2023

Baltimore County is relatively well-educated, with 67.1% of residents having received some education beyond high school. Baltimore County's proportion of the population with a bachelor's degree was slightly higher than that of Baltimore City, Maryland, and the U.S.

	Baltimore County	Baltimore City	Maryland	United States
Less than 9 th Grade	2.6%	3.5%	3.2%	4.1%
Some High School/No Diploma	4.8%	8.8%	4.9%	5.5%
High School Diploma	22.1%	23.9%	21.4%	22.9%
GED/Alternative Credential	3.3%	5.2%	3.1%	4.1%
Some College/No Diploma	17.1%	16.9%	16.4%	17.7%
Associate's Degree	7.8%	5.7%	7.5%	9.5%
Bachelor's Degree	23.8%	18.3%	23.3%	22.3%
Graduate/ Professional Degree	18.4%	17.7%	20.2%	13.9%

Source: Esri 2023

The overall unemployment rate in Baltimore County was higher than Maryland, and the U.S. overall in 2023, but lower than Baltimore City. The highest rate of unemployment in the county was among people ages 25 to 54.

⁷ The Supplemental Nutrition Assistance Program (SNAP) provides nutrition assistance to eligible, low-income individuals and households. It is the largest Federal nutrition assistance program. Source: [USDA Supplemental Assistance Program fact sheet](#).

	Baltimore County	Baltimore City	Maryland	United States
Percentage unemployed ages 16 to 24	1.3%	1.7%	1.2%	1.3%
Percentage unemployed ages 25 to 54	1.9%	2.8%	1.9%	2.2%
Percentage unemployed ages 55 to 64	0.6%	0.7%	0.5%	0.6%
Percentage unemployed ages 65 or more	0.3%	0.5%	0.2%	0.2%
Total unemployment	4.1%	5.7%	3.8%	3.7%

Source: Esri 2023

In 2023, the age group in both Baltimore County and Baltimore City least likely to have health insurance was adults ages 35 to 64. Baltimore County has proportions of uninsured individuals across almost every age group lower than the U.S. as a whole, but similar to both Baltimore City and Maryland.

	Baltimore County	Baltimore City	Maryland	United States
Percentage uninsured ages 18 or below	0.9%	0.8%	0.9%	1.3%
Percentage uninsured ages 19 to 34	1.9%	2.2%	2.1%	3.2%
Percentage uninsured ages 35 to 64	2.3%	2.9%	2.8%	4.2%
Percentage uninsured ages 65 or more	0.1%	0.1%	0.1%	0.1%

Source: Esri 2023

Social Determinants of Health

In addition to the considerations noted above, there are many other factors that can positively or negatively influence a person’s health. The Steering Committee recognizes this and believes that, to portray a complete picture of the county’s health status, it first must address the factors that impact community health. The Centers for Disease Control and Prevention (CDC) defines social determinants of health (SDoH) as the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality of life outcomes and risks. According to the CDC’s “Social Determinants of Health” from its *Healthy People 2030* public health priorities initiative, factors contributing to an individual’s health status can include the following: healthcare access and quality, neighborhood and built environment, social and community context, economic stability, and education access and quality.

Figure 3.2: Social Determinants of Health



As seen in Figure 3.2, many of the factors that contribute to health are hard to control or societal in nature. As such, health and healthcare organizations need to consider many underlying factors that may impact an individual’s health and not simply their current health conditions.

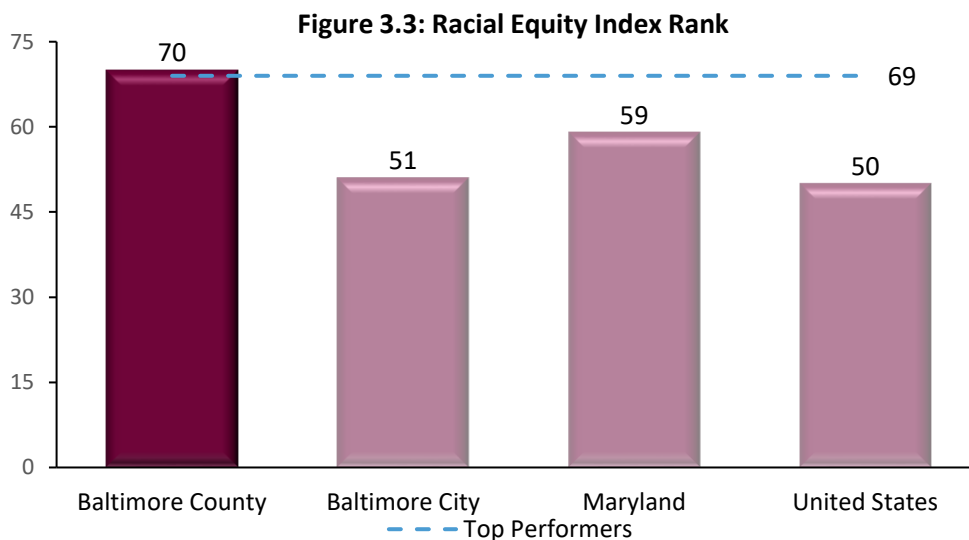
It is widely acknowledged that people with lower income, social status and levels of education find it harder to access healthcare services compared to people in the community with more resources. Being unable to access healthcare services is a factor that contributes to poor health status. Further, people in communities with fewer resources may also experience high levels of stress, which also contributes to worse health outcomes, particularly related to mental or behavioral health.

The CHNA Steering Committee collected new data via focus groups and surveys to ensure that residents and key community health leaders could provide input regarding the needs of their specific communities. An analysis of the racial and geographic disparities that emerged in the information obtained and analyzed during this process is detailed below.

Disparities

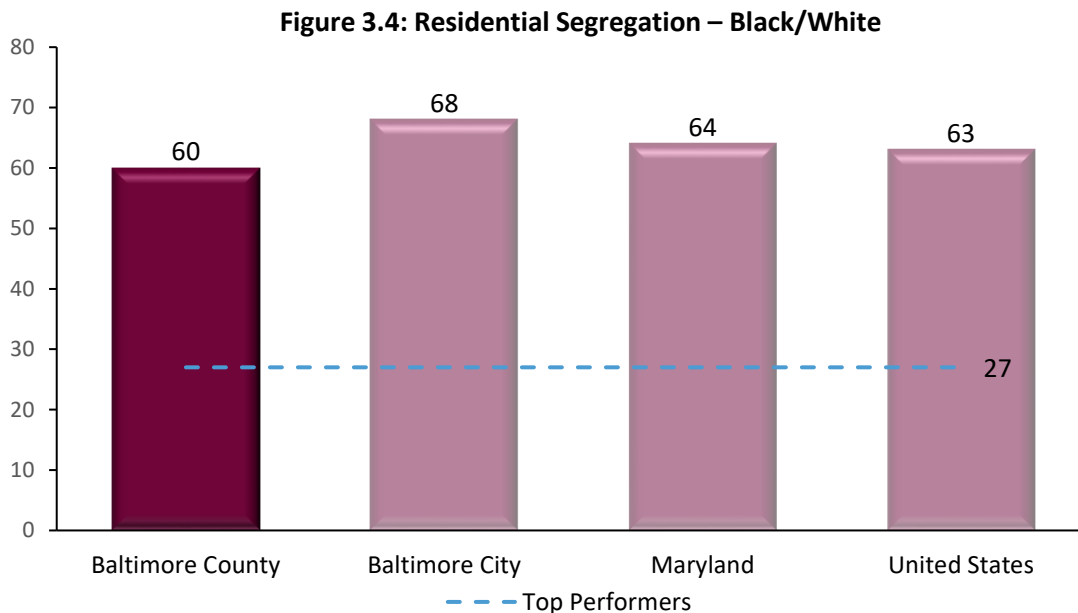
Recognizing the diversity of Baltimore County, as discussed above, the Steering Committee evaluated factors that may contribute to health disparities in its community. These included racial equity; racial segregation; financial barriers; nutrition; social, behavioral, and economic factors that influence health; and English language proficiency.

The Racial Equity Index measures disparities between racial groups based on inclusion and prosperity. As seen in Figure 3.3, Baltimore County performs higher than Baltimore City, Maryland and the U.S. Higher scores are better and indicate smaller racial gaps. In this graphic and the following, the blue line indicates geographies that perform best in that indicator.



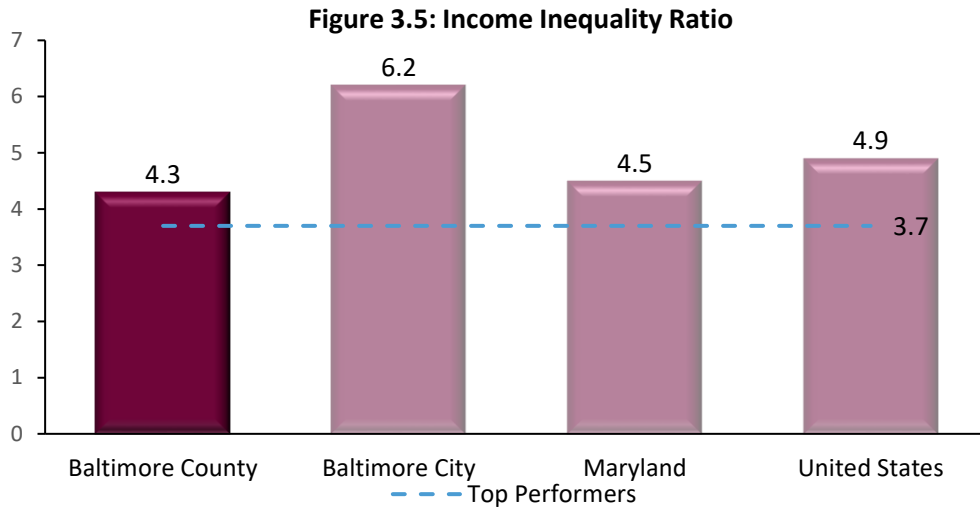
Source: National Equity Atlas 2020

Residential segregation is measured by the index of dissimilarity, a demographic measure ranging from 0 to 100 that represents how evenly two demographic groups are distributed across a county’s census tracts. Lower scores represent a higher level of integration. Baltimore County has a lower level of segregation between Black and white residents than Baltimore City, Maryland and the U.S. overall, as seen in Figure 3.4.



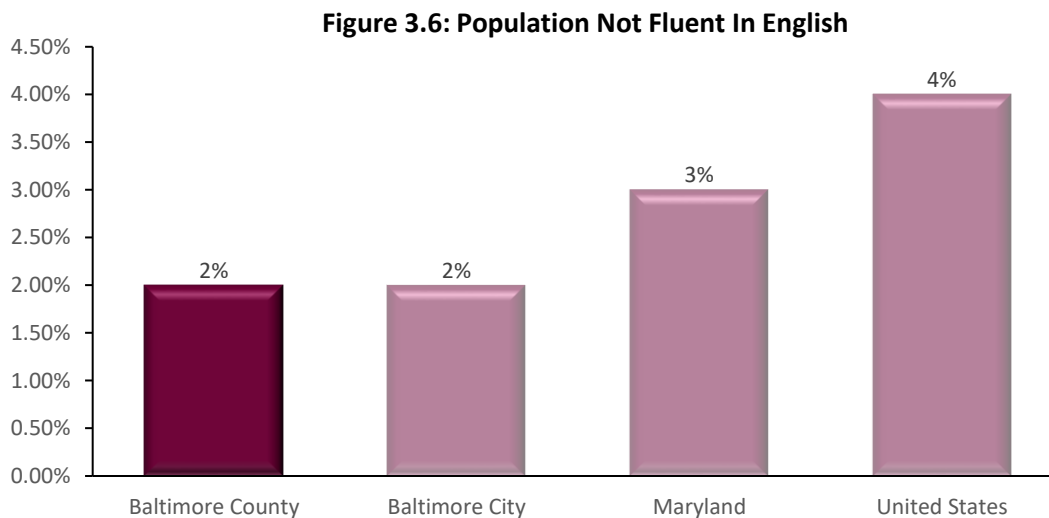
Source: Robert Wood Johnson County Health Rankings 2023

Income inequality is measured as the ratio of household income at the 80th percentile to household income at the 20th percentile. Communities with greater income inequality may have worse outcomes on a variety of metrics, including mortality, poor health, sense of community, and social support. As seen in Figure 3.5, Baltimore County’s income inequality ratio is much lower than Baltimore City’s, and lower than the state of Maryland and the U.S.



Source: Robert Wood Johnson County Health Rankings 2023

People with limited English proficiency (LEP) may face challenges accessing care and resources that fluent English speakers do not. Language barriers may make it hard to access transportation, medical, and social services as well as limit opportunities for education and employment. Importantly, LEP community members may not understand critical public health and safety notifications, such as safety-focused communications during the COVID-19 pandemic. In 2022, just 2% of Baltimore County residents reported speaking English less than “very well.” This is comparable to the rate of Baltimore City, but lower than the rates in Maryland and the U.S., as seen in Figure 3.6.



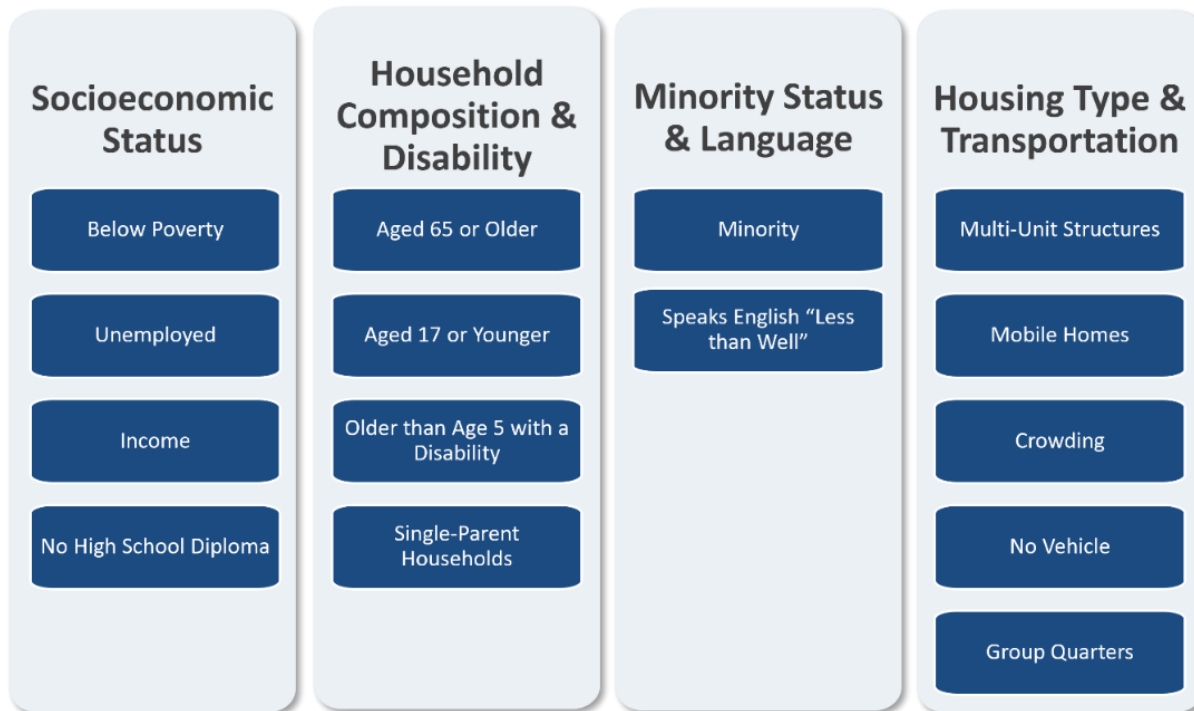
Source: American Community Survey 5-year estimates (2017-2022)

Social Vulnerability Index

One resource that can help show variation and disparities between geographic areas is the Social Vulnerability Index (SVI), which was developed by the CDC and the Agency for Toxic Substances and Disease Registry (ATSDR). Social vulnerability refers to negative effects communities may experience due to external stresses that impact human health, like natural or human-caused disasters, or disease outbreaks. Socially vulnerable populations are at especially high risk during public health emergencies.

The SVI uses 16 U.S. Census variables to help local officials identify communities that may need support before, during, or after a public health emergency.⁸ Communities with a higher SVI score are generally at a higher risk for poor health outcomes. Instead of relying on public health data alone, the SVI accounts for underlying economic and structural conditions that affect overall health, including SDoH. SVI scores are calculated at the census tract level and based on U.S. Census variables across four related themes: socioeconomic status, household characteristics, racial and ethnic minority status, and housing type/transportation. Figure 3.7 outlines the variables used to calculate SVI scores.

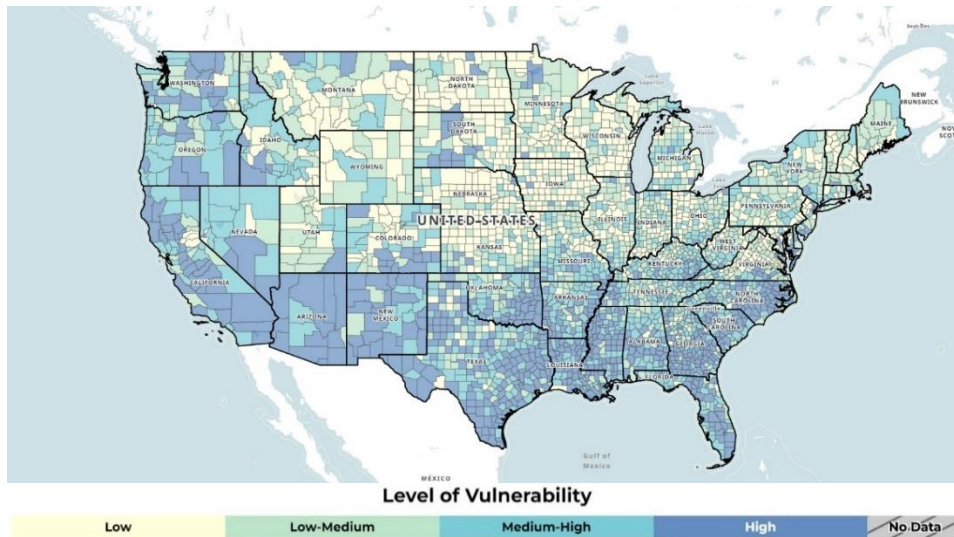
Figure 3.7: Social Vulnerability Index Variables



⁸ Tsai, et al (2022). CDC/ATSDR Social Vulnerability Index (SVI). Retrieved from <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>.

The United States SVI by county is shown in Figure 3.8 below. As shown, a lot of variation exists across the country, and even within individual states.

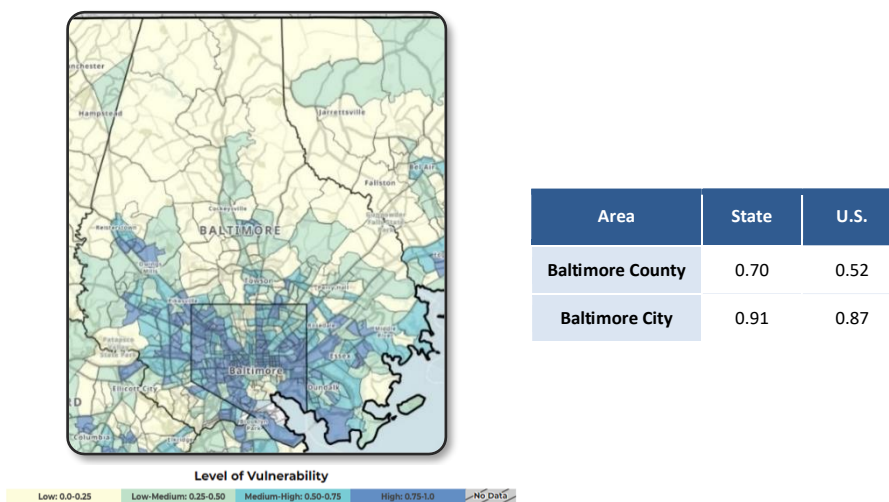
Figure 3.8: Social Vulnerability Index by County, 2020



Source: CDC/ATSDR Social Vulnerability Index (SVI) 2020 SVI by County; accessed at https://www.atsdr.cdc.gov/placeandhealth/svi/interactive_map.html.

The 2020 SVI scores for Baltimore County and Baltimore City are shown in Figure 3.9 below. Possible scores range from 0 (lowest vulnerability) to 1 (highest vulnerability), and these scores show a relative comparison with other counties and census tracts in Maryland. Given this, the vulnerability of Baltimore County overall is fairly high compared to the state, with an SVI score of 0.70. However, specific regions within the county, particularly those closest to the city border, demonstrate higher vulnerability.

Figure 3.9: Baltimore County Social Vulnerability Index, 2020



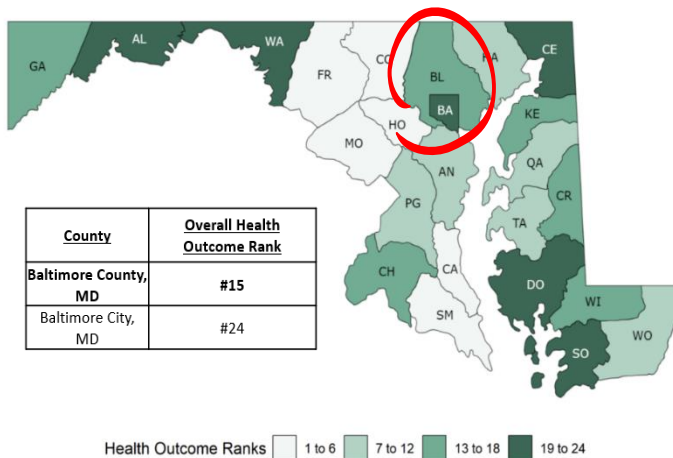
Source: CDC/ATSDR Social Vulnerability Index (SVI) 2020 SVI by County; accessed at https://www.atsdr.cdc.gov/placeandhealth/svi/interactive_map.html.

Health Outcome and Health Factor Rankings

The Steering Committee also reviewed and analyzed data from the Robert Wood Johnson Foundation and the University of Wisconsin County Health Rankings for the year 2023. Out of 24 reported counties in Maryland for health outcomes, Baltimore County ranks 15th overall, as seen in Figure 3.10 below. This includes ranking 13th among 24 reported counties on Length of Life, and 16th overall for Quality of Life. These categories are discussed further in Appendices 2 through 4.

Figure 3.10

2023 Health Outcomes - Maryland

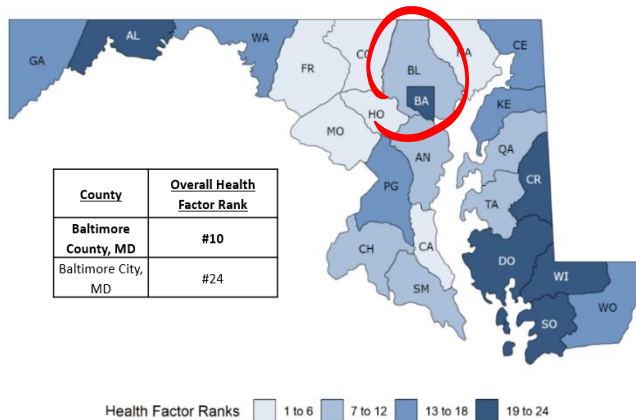


Source: Robert Wood Johnson Foundation, 2023 County Health Rankings.

Lastly, out of 24 reported counties in Maryland for health factors, Baltimore County ranks 10th overall as seen in Figure 3.11.

Figure 3.11

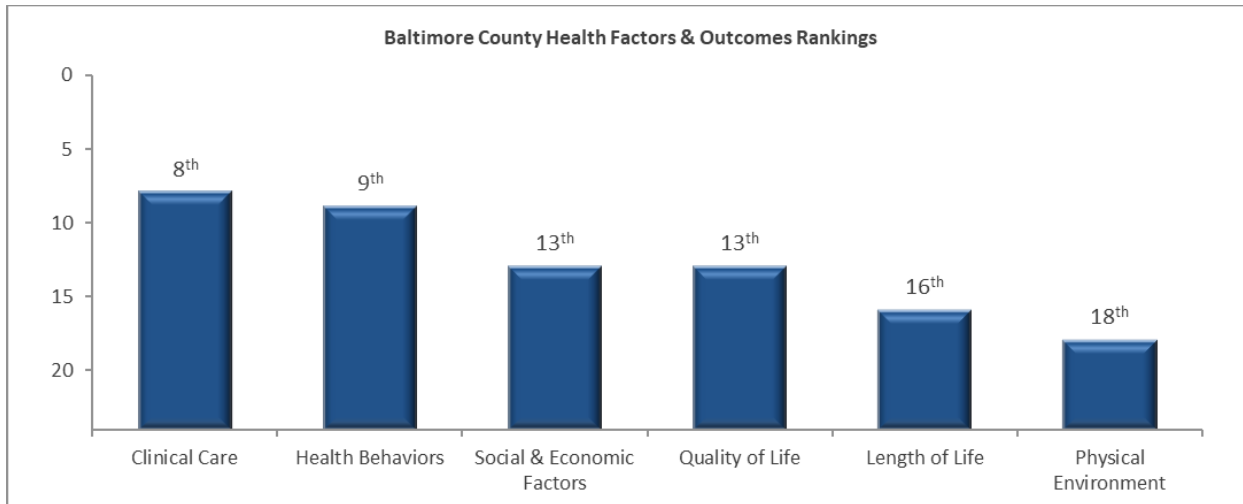
2023 Health Factors - Maryland



Source: Robert Wood Johnson Foundation, 2023 County Health Rankings.

Figure 3.12 shows that Baltimore County ranks 8th among 24 reported Maryland counties for Clinical Care, 9th for Health Behaviors, and 13th for Social & Economic factors. Baltimore County also ranked 18th for Physical Environment. These categories are also discussed further in Appendices 2 through 4.

Figure 3.12: Baltimore County Health Factors and Outcomes



Source: Robert Wood Johnson Foundation, 2023 County Health Rankings.

CHAPTER 3 | PRIORITY NEED AREAS

This chapter describes each of the three priority areas in more detail and discusses the data that supports each priority. The information in this section includes context and national perspective, secondary data findings, and primary data findings (including key leader survey, community member survey, and focus groups).

As mentioned previously, these priority needs areas are not listed in any hierarchical order of importance and all will be addressed by the Steering Committee in health improvement plans guided by this CHNA. As noted in Chapter 1, the Steering Committee considered the following factors when determining the priority needs reported in this assessment:

- Size and scope of the health need;
- Severity and intensity of the health need;
- Estimated feasibility and effectiveness of possible interventions;
- Health disparities associated with the need; and
- Importance the community places on addressing the need.

Priority Need: Behavioral Health

Context and National Perspective

The definition of behavioral health often describes conditions related to both mental health and substance use.⁹ After evaluating data from a variety of sources including surveys and focus groups conducted throughout the assessment process, the Steering Committee identified behavioral health, including both mental health and substance use, to be an area of urgent need within Baltimore County.

Mental illnesses are common in the United States: in 2021, an estimated 57.8 million U.S. adults – nearly one in five – were living with a mental illness.¹⁰ Four years following the onset of the COVID-19 pandemic, concerns about mental health and substance use remain high nationwide. The pandemic impacted public mental health and well-being in many ways. Community members continue to grapple with the pandemic-related effects of isolation and loneliness, financial instability, long-term health impacts and grief. In addition, both drug overdose and suicide deaths have sharply increased over the past several years – often disproportionately impacting younger people and communities of color.¹¹

⁹ Source: American Medical Association (2022). *What is behavioral health?* Retrieved September 13th, 2023, from <https://www.ama-assn.org/delivering-care/public-health/what-behavioral-health>.

¹⁰ Source: National Institute of Mental Health (2023). *Mental Illness*. Retrieved September 13th, 2023, from <https://www.nimh.nih.gov/health/statistics/mental-illness>.

¹¹ Source: Panchal, N., Saunders H., Rudowitz, R. and Cox, C. (2023). The Implications of COVID-19 for Mental Health and Substance Use. *Kaiser Family Foundation*. Retrieved from <https://www.kff.org/mental-health/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use>.

Access to services that address mental health and substance use is an ongoing challenge across the U.S. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), in 2021, less than half (47.2%) of U.S. adults who reported having a mental illness utilized any type of mental health services, including inpatient, outpatient or telehealth services or prescription drug therapies.¹² Demand for mental health services, particularly anxiety and depression treatment, remains high across the nation, while the prevalence of stress- and trauma-related disorders, along with substance use disorders, continues to grow. The American Psychological Association reports that the percentage of psychologists in the U.S. seeing more patients than they did before the pandemic increased from 15% in 2020 to 38% in 2021 to 43% in 2022. Further, 60% of psychologists reported having no openings for new patients and 38% maintained a waitlist for their services.¹³

Substance use disorders (SUDs) are one of the fastest rising categories of behavioral health disorders. According to the American Psychiatric Association, SUDs are a complex condition in which there is uncontrolled use of a substance, despite harmful consequences.¹⁴ SUDs often occur in conjunction with other mental illness. In 2022, 17 million (48.8%) young adults aged 18-25 reported having either a SUD or Acute Mental Illness (AMI) in the past year.¹⁵ In that same year, 17.3% (48.7 million) of all U.S. adults were reported as having an SUD.¹⁵ These trends have been increasing in recent years. According to the National Center for Drug Abuse Statistics, in 2018 (3.7%) of all adults aged 18 and older (9.2 million) had both an AMI and at least one SUD.¹⁶ By 2021, this had increased to 13.5% of U.S. adults, with the highest incidence among Multiracial adults.

Secondary Data Findings

Secondary data collected through the CHNA process identified behavioral health as an area of particular concern for residents of Baltimore County. In 2021, 20.7% of Baltimore County residents self-reported that a health professional has told them that they have a depressive disorder, higher than both the state of Maryland (16.6%) and the US (20.5%).¹⁷ Multiple mental health indicators in Baltimore County were higher than the state and national averages, with 15% of the population experiencing frequent mental distress (compared to 13% for the state and 14% nationally), and residents reporting an average of 4.5 poor mental health days per month (4.1 for state and 4.4 for national respectively). Drug overdoses in Baltimore County accounted for 51 deaths per 100,000 individuals, higher than the state rate (41 deaths

¹² Source: SAMHSA (2023). *Highlights from the 2021 National Survey on Drug Use and Health*. Retrieved September 13th, 2023, from <https://www.samhsa.gov/data/sites/default/files/2022-12/2021NSDUHFFRHighlights092722.pdf>.

¹³ Source: American Psychological Association (2022). *2022 COVID-19 Practitioner Impact Survey*. Retrieved September 13th, 2023, from <https://www.apa.org/pubs/reports/practitioner/2022-covid-psychologist-workload.pdf>.

¹⁴ Source: American Psychiatric Association (2024). *Addiction and Substance Use Disorders*. Retrieved January 16, 2024, from <https://www.psychiatry.org/patients-families/addiction-substance-use-disorders>.

¹⁵ Source: SAMHSA (2023). *Highlights from the 2022 National Survey on Drug Use and Health*. Retrieved January 16th, 2023, from <https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-main-highlights.pdf>.

¹⁶ Source: National Center for Drug Abuse Statistics (2023). *Drug Abuse Statistics*. Retrieved January 8th, 2024, from <https://drugabusestatistics.org/>.

¹⁷ Source: CDC (2022). *Behavioral Risk Factor Surveillance System*. Retrieved January 9th, 2024, from https://data.cdc.gov/Behavioral-Risk-Factors/Behavioral-Risk-Factor-Surveillance-System-BRFSS-P/dttw-Syxu/data_preview

per 100,000), and more than double the national rate (23 deaths per 100,000). Excessive drinking among adults was lower than the national rate, (17% vs. 19% respectively), but higher than the rate in Maryland (15%).

Indicator	Baltimore County	Baltimore City	Maryland	United States
Drug Overdose Deaths per 100,000	51	124	41	23
Percent of Population Experiencing Frequent Mental Distress	15%*	16%	13%	14%
Number of Poor Mental Health Days in the Past Month	4.5*	5.4	4.1	4.4
Percent of Adults Reporting Excessive Drinking	17%	18%	15%	19%

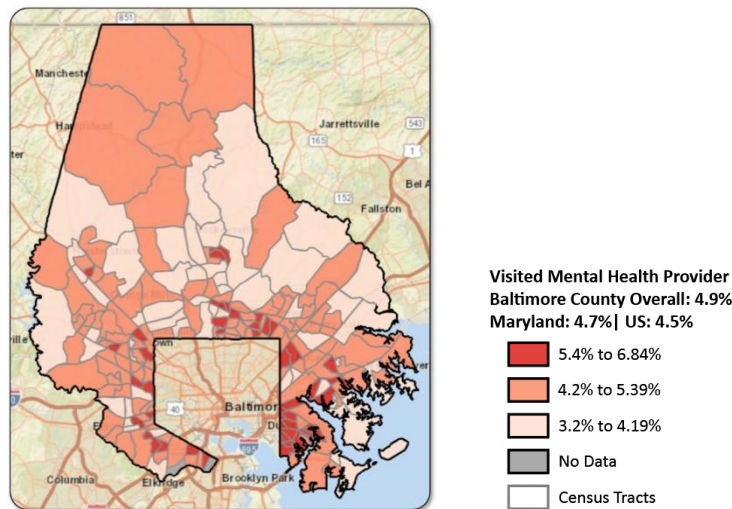
Source: Robert Wood Johnson Foundation, County Health Rankings 2023

*Indicates areas of high need

When compared to the previous CHNA, which was conducted in 2020, each of these statistics have increased. The population experiencing frequent mental distress increased from 12% in 2020 to 15% in 2023. The average monthly number of poor mental health days reported by residents increased as well, from 3.8 to 4.5 days. In 2023, 4.9% of residents in Baltimore County reported visiting a mental health provider, slightly higher than the state average of 4.7%, and the national average of 4.5%.

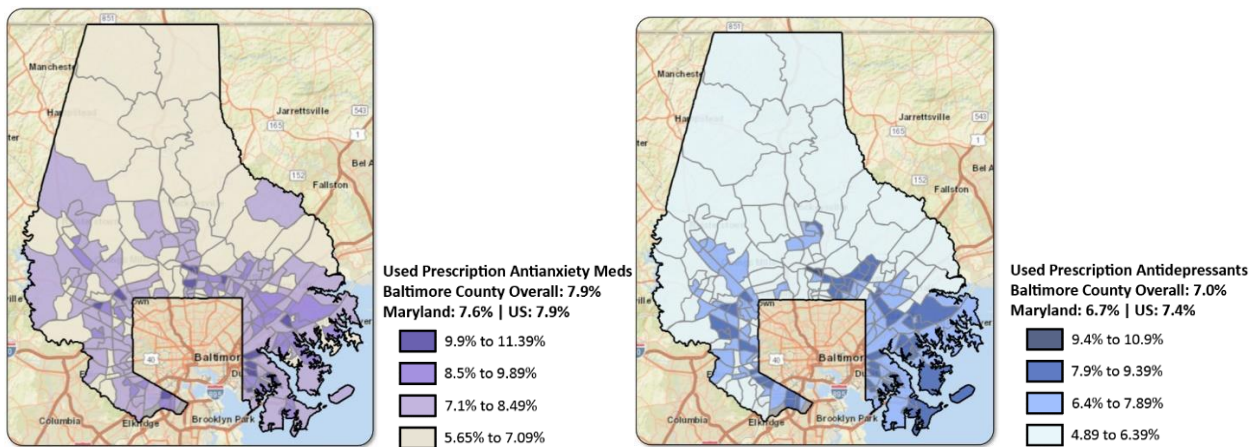
Figure 4.1 shows that, in 2021, there were more visits to mental health providers concentrated towards the city border, with fewer visits occurring in the outlying regions of the county.

Figure 4.1: Percentage of Population who Visited a Mental Health Provider, 2021



In 2021, 7.0% of Baltimore County residents used prescription antidepressants, which was slightly higher than the state average of 6.7%, and lower than the national average of 7.4%. There is a similar geographic trend in the usage of antidepressants and anti-anxiety medication as there is in mental health visits. As Figure 4.2 shows, the highest concentrations of medication usage were in neighborhoods adjacent to the border with the City of Baltimore, especially the southeastern region closest to Chesapeake Bay.

Figure 4.2: Percentage of Population who Used Prescription Antidepressants or Anti-Anxiety Medications, 2021



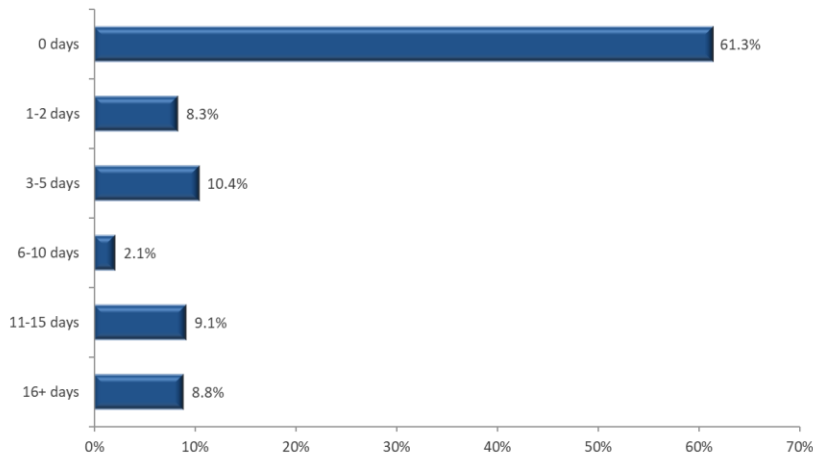
Primary Data Findings – Community Member Survey

More than 2,000 people who live, work or receive healthcare in Baltimore County responded to the community member survey. When asked to identify the top five community health needs in Baltimore County, mental health was identified as a top concern by 57.4% of respondents, and 41.6% identified alcohol and drug addiction.

As seen in Figure 4.3, responses related to individual mental health concerns were largely positive, with 61.3% of respondents reporting that they had not experienced any poor mental health days the prior 30-day period. Nearly one-quarter of respondents reported that they had experienced 10 or fewer poor mental health days in the previous month (21%), while 18% reported having poor mental health on 11 days or more. While most Baltimore County residents reported fewer poor mental health days than the state average (4.1 days per month), a significant proportion of residents (18%) spent more than one-third of the month experiencing mental health concerns.

Figure 4.3

For how many of the last 30 days did you experience poor mental health?
n= 1,862

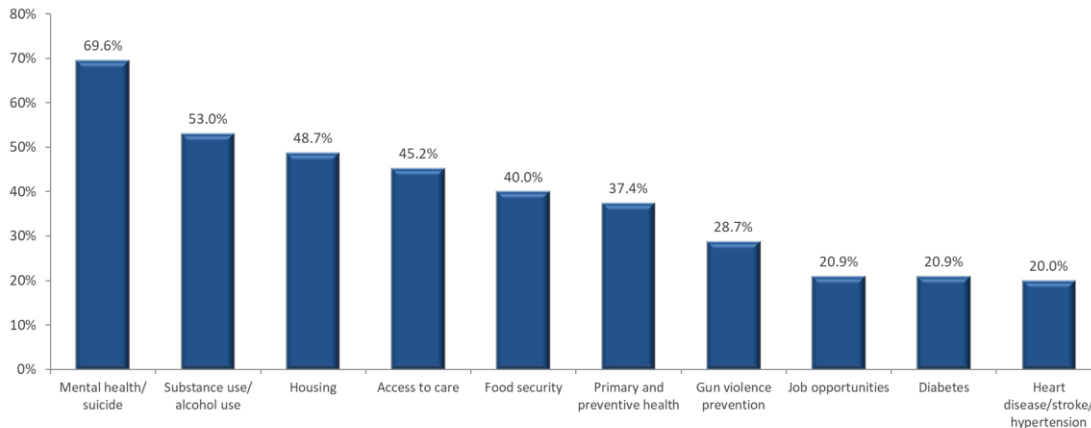


Primary Data Findings – Key Leader Survey

Key leaders surveyed during the CHNA process identified mental health/suicide and substance or alcohol use as the top two health issues impacting residents of Baltimore County. Among 115 key leaders from various organizations who responded to the survey, 69.6% identified mental health and suicide as a top community health need in Baltimore County. Substance and alcohol use ranked second in the survey and was identified as a top concern by 53% of respondents. Multiple community resources to address behavioral and mental health were identified in this survey as being both helpful to address these concerns and insufficient to meet existing levels of community need. Key leaders described a need for more comprehensive resources or easier access to existing resources. Respondents were also asked to identify the five most significant social needs in the community they serve, and the need for expanded substance and alcohol use treatment was selected by 41% of respondents.

Figure 4.4

Please rank the top FIVE (5) community health needs of the Baltimore County.
n= 115



A lack of resources to address behavioral health was also noted when respondents were asked to indicate how strongly they agreed or disagreed with statements about different types of providers in the community. The majority (60%) of key leaders disagreed when asked to evaluate the statement “there are enough substance abuse treatment providers.” When looking at health and social needs as a whole, key leaders noted mental health and substance use issues as particularly prevalent in the southeastern and southwestern portions of the County. This aligns with the geographic trends previously described in the secondary data findings, which show concentrations in utilization of mental health providers and prescription medication usage in those areas as well.

Primary Data Findings – Focus Groups

Thirteen focus groups were conducted during the CHNA process, with more than 90 community members and other stakeholders providing input on a variety of health and social concerns. Five of these focus groups identified mental health as being a top health concern in Baltimore County, and three identified substance use disorders as a major concern as well. However, the most significant concerns identified by the focus groups focused more heavily on social and environmental concerns, such as food insecurity, overall access to healthcare, and transportation to appointments and health services.

Focus group participants were given the opportunity to share their personal experiences surrounding mental health and substance use. For example, one focus group featured clients at a clinic that serves individuals experiencing homelessness and participants provided some commentary on their experiences with providers in their community. One participant shared a situation where they told their provider they did not want a certain medication due to the risk of addiction or dependence, but it was prescribed to them anyway. This comment led to other focus group members to speak out in agreement, and voice their wish for providers to develop a greater level of trust with their patients to better understand their concerns – particularly as it relates to behavioral health.

Another focus group featured participants living with various behavioral health conditions. Participants expressed concerns about a lack of awareness of the connection between substance use, mental health, and childhood trauma. Participants noted that, often, individuals are unable or unwilling to recognize the impact of their own past traumas, and that there is a lack of reliable mental health providers or social workers available in the community to help address their trauma and find reliable pathways for accessing help.

Priority Need: Physical Health

Context and National Perspective

Physical health is the monitoring and maintenance of the human body. There are many factors involved in an individual’s overall physical health status, such as disease prevention, timely access to primary and preventive healthcare, exercise, and maintaining a healthy diet. Physical health can also involve the management of chronic health conditions. As society has changed and people live longer, chronic health conditions have become more common than communicable diseases like typhoid and cholera. As defined by the World Health Organization (WHO), chronic diseases are those with a long duration, that are

influenced by a combination of genetic, environmental, psychological, or behavioral factors.¹⁸ Chronic health conditions are extremely common in the United States, with 6 in 10 Americans living with at least one chronic disease, such as diabetes, obesity, cancer, hypertension, or heart disease.¹⁹

Chronic diseases are the leading cause of death and disability in the United States.¹⁸ According to the WHO, chronic health conditions kill 41 million people globally each year and are responsible for 7 in 10 deaths in the U.S. annually.¹⁸ The number of individuals living with a chronic health condition is expected to increase as the U.S. population continues to age. The population over the age of 50 is expected to increase by 61% to 221.1 million people by 2050.²⁰ Among those 221 million, nearly two-thirds (142.7 million people) are expected to have at least one chronic health condition, with approximately 15 million people living with multiple chronic health conditions.²⁰

Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells that can result in death if not treated. While the risk of dying from cancer has declined significantly over the past 30 years, it remains the second most common cause of death in the U.S. Incidence of new cancer cases has continued to rise, with 2 million new cases expected to be identified in 2024.²¹ This trend is largely affected by the aging and growth of the population and by a rise in diagnoses of 6 of the 10 most common cancers—breast, prostate, endometrial, pancreatic, kidney, and melanoma. Some research has attributed this rise to the impact of the obesity epidemic.²¹ Cigarette smoking is another significant risk factor for cancer, and is responsible for about 20% of all cancers and 30% of cancer deaths in the U.S. each year.²²

The WHO defines overweight and obesity as abnormal or excessive fat accumulation that presents risks to a person’s health.¹⁸ Obesity is one of the fastest rising chronic conditions in the United States. According to the CDC, the U.S. obesity prevalence rate between 2017-2020 was 41.9%, which represents a significant increase from 30.5% in 2000.²³ Obesity is often a factor in other chronic health conditions, such as stroke, diabetes, heart disease, and in some types of cancer.

The CDC recommends four ways to prevent chronic conditions and maintain good physical health. Recommended healthy behaviors include stopping or refraining from smoking, eating low-fat whole food diets, exercising moderately for at least 150 minutes a week, and limiting or refraining from consuming

¹⁸ Source: World Health Organization (WHO) (2023). *Noncommunicable diseases*. Retrieved January 23rd, 2024, from: <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>.

¹⁹ Source: CDC (2024). *National Center for Chronic Disease Prevention and Health Promotion*. Retrieved January 23, 2024, from: <https://www.cdc.gov/chronicdisease/index.htm>.

²⁰ Source: Ansah, J.P. & Chiu, T.C., (2022). Projecting the chronic disease burden among the adult population in the United States using a multi-state population model. *Frontiers in Public Health*. Retrieved January 23, 2024, from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9881650/>.

²¹ Source: American Cancer Society (ACS) (2024). *ACS Fast & Figures 2024*. Retrieved January 24th, 2024, from <https://www.cancer.org/research/acs-research-news/facts-and-figures-2024.html>.

²² ACS (2020). *Health Risks of Smoking Tobacco*. Retrieved March 7th, 2024 from <https://www.cancer.org/cancer/risk-prevention/tobacco/health-risks-of-tobacco/health-risks-of-smoking-tobacco.html>

²³ Source: CDC (2022). *Adult Obesity Facts*. Retrieved January 23rd, 2024, from <https://www.cdc.gov/obesity/data/adult.html>.

alcohol.²⁴ Annual physicals with a primary care provider are also necessary to help prevent or treat chronic health conditions. Yearly screenings can allow providers to identify any warning signs for developing conditions and enable patients to correct or develop healthy behaviors to avoid developing a physical health condition. A CDC study noted that one-third of visits to health centers in 2020 were for preventive care.²⁵ For those living with chronic conditions, the CDC recommends some general steps people can take to manage their diseases. These include taking medications as prescribed by a provider, self-monitoring symptoms as needed (such as conducting home blood sugar checks), and regularly seeing a provider for check-ups.

Secondary Data Findings

Baltimore County performed worse than the state of Maryland in nearly all physical health indicators, as shown in Table 4.2. This includes a higher percentage of residents experiencing frequent physical distress, or self-reporting poor or fair health status. Baltimore County also had slightly higher prevalence of diabetes and obesity among adults when compared to the state.

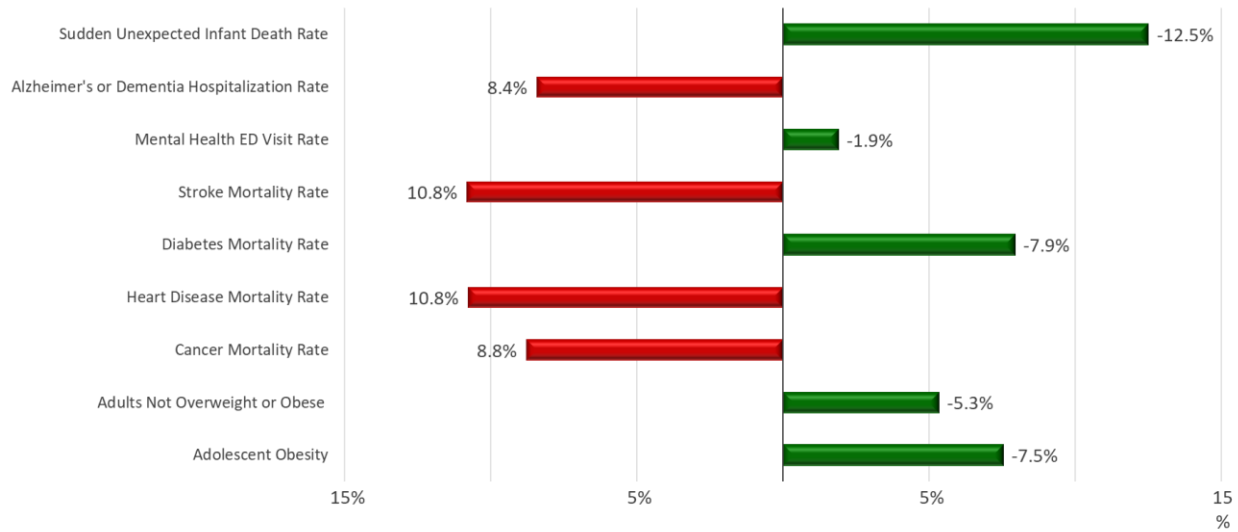
Indicator	Baltimore County	Baltimore City	Maryland	United States
Percentage of Population Experiencing Frequent Physical Distress	8%	10%	7%	9%
Number of Poor Physical Health Days in the Last 30 Days	2.5	3.3	2.5	3
Percentage of Population Reporting Poor or Fair Health	12%	17%	11%	12%
Percent of Population Reporting Insufficient Sleep	34%	40%	34%	33%
Adult Diabetes Prevalence	9%	13%	9%	9%
Adult Obesity Prevalence	32%	37%	31%	32%

When compared to the state overall, Baltimore County had measurably worse rates of hospitalization for Alzheimer’s disease or other dementias, as well as higher rates of mortality due to stroke, heart disease and cancer.

²⁴ Source: CDC (2023). *Top 4 tips to Prevent Chronic Diseases*. Retrieved January 31, 2024, from: <https://www.cdc.gov/chronicdisease/about/top-four-tips/index.htm>.

²⁵ CDC (2022). *Characteristics of visits to health centers: United States, 2020*. Retrieved January 31, 2024, from <https://www.cdc.gov/nchs/products/databriefs/db438.htm>.

Figure 4.5: Physical Health Indicators: Variance from State



Baltimore County also underperformed relative to the state in a number of health behaviors that have an impact on physical health. Baltimore County residents had higher rates of physical inactivity and smoking – both of which have been shown to increase the risk of various chronic health conditions. Despite having a higher rate of physical inactivity than the state, Baltimore County does have a higher proportion of its population with access to exercise opportunities. Food insecurity was also a concern for Baltimore County residents, which is notable due to the impact diet has on overall physical health.

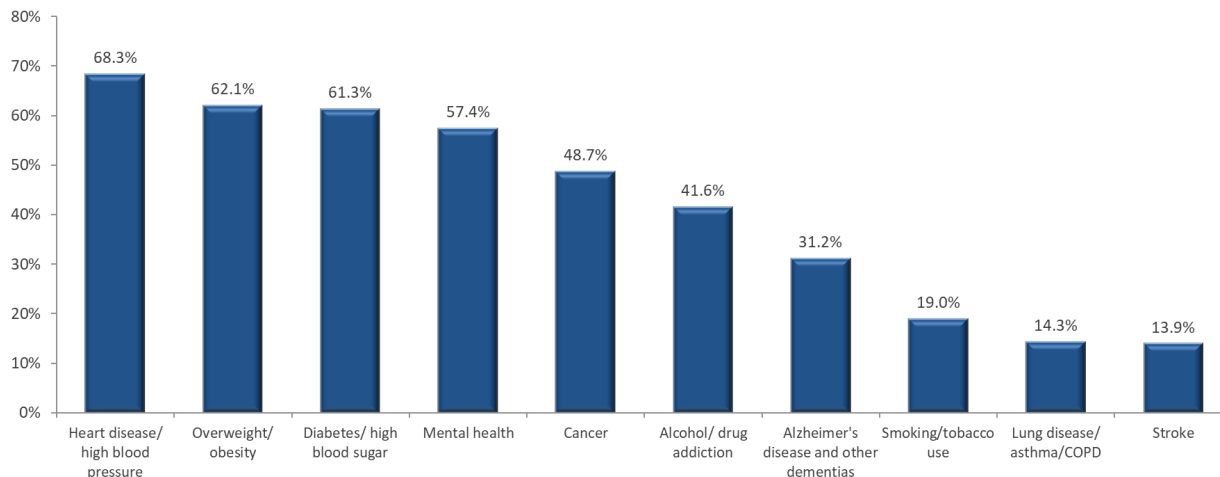
Table 4.3: Health Behavior and Food Security Indicators				
Indicator	Baltimore County	Baltimore City	Maryland	United States
Percent of Physically Inactive Adults	22%	25%	21%	22%
Percent of Adult Smokers	14%	19%	11%	16%
Food Environment Index	8.3	7.5	8.7	7
Percent of Population with Access to Exercise Opportunities	97%	99%	92%	84%
Percent of Population Experiencing Food Insecurity	10%	16%	9%	12%
Percent with Limited Access to Healthy Foods	4%	2%	4%	6%
Percent of Children Eligible for Free or Reduced Lunch	52%	66%	45%	53%

Primary Data Findings – Community Member Survey

Community members who responded to the survey identified various conditions related to physical health among the top community health needs in Baltimore County. Heart disease and high blood pressure were identified as the top community health need overall, having been selected by 68.3% of respondents. Overweight and obesity was identified as the second highest need by 62.1% of respondents, while diabetes and high blood sugar ranked third (61.3%). Other physical health conditions were also ranked among the top ten community health needs, including cancer (48.7%), Alzheimer’s disease and other dementias (31.2%), lung conditions (14.3%) and stroke (13.9%). In addition, nearly one in five respondents identified smoking or tobacco use as a primary concern, which is of note due to the significant health impacts that can result from tobacco exposure.

Figure 4.6

Please select the top FIVE (5) community health needs of Baltimore County.
n= 1,914



Primary Data Findings – Key Leader Survey

Among respondents to the key leader survey, approximately 21% identified diabetes and 20% identified heart disease, stroke, or hypertension among the most pressing health needs in Baltimore County. The need for primary and preventive healthcare, which helps promote physical health and well-being, was identified as a top need by 37.4% of respondents. In addition, more than half of Baltimore County key leaders (56%) indicated that there were not enough indoor places to get physical activity, one-third felt there were not enough outdoor places to get physical activity (30%) and 56% felt that children did not have enough opportunities to play and socialize outside of school.

Primary Data Findings – Focus Groups

Participants in the focus groups came from a wide variety of backgrounds, ranging from military veterans to those involved with a local YCMA, independent seniors, and those living with various physical health conditions. When asked to identify the most serious health issues impacting their community, participants

described an array of physical health conditions, including diabetes (type 1 and type 2), hypertension, obesity, cancer, and dehydration.

Access to healthy food was noted as a contributing factor that directly impacts many of these health concerns. Multiple focus groups described a lack of access to grocery stores as well as a lack of healthy, convenient food options within walking distance of their homes or workplaces. One focus group featuring military veterans noted that subscription healthy meal services were a helpful option, however the cost may not be accessible to those with lower incomes. This group also noted a lack of access to fresh food in the winter, and that less healthy canned food was more commonly eaten. Participants in a focus group featuring clients at a clinic that provides services to individuals experiencing homelessness also expressed that it can be difficult to carry multiple or large items on public transportation. This presents a challenge for some to be able to transport healthy groceries home, especially those who are elderly or have mobility challenges.

Focus group participants also described other challenges that impact the physical health of the community. Participants living with type 2 diabetes, in particular, cited a need for safe outdoor spaces where they can exercise without having to pay for a gym membership. These community members also expressed a need for providers to better educate their patients on preventive screenings and healthy behaviors, to help patients understand how to prevent certain chronic health conditions. This group felt that not enough attention was given to preventive health education, and that providers are often more focused on treating acute conditions.

Priority Need: Access to Care

Context and National Perspective

Access to care means patients are able to get high quality, affordable healthcare in a timely fashion to achieve the best possible health outcomes. It includes several components, including coverage (i.e. insurance), a physical location where care is provided, the ability to receive timely care, and enough providers in the workforce. The CHNA Steering Committee identified access to care as a high priority need for residents of Baltimore County

From a national perspective, according to Healthy People 2030, approximately one in ten people in the U.S. do not have health insurance, which means they are less likely to have a primary care provider or to be able to afford the services or medications they need.²⁶ Access is a challenge even for those who are insured.²⁷

The availability and distribution of health providers in the U.S. contributes to healthcare access challenges. According to the Association of American Medical Colleges (AAMC), there is estimated to be a shortage

²⁶ Source: U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion (2023). *Healthy People 2030: Health Care Access and Quality*. Retrieved September 14th, 2023 from <https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-care-access-and-quality>.

²⁷ Source: Phillips, K.A., Marshall, D.A., Adler, L., Figueroa, J., Haeder, S.F., Hamad, R., Hernandez, I., Moucheraud, C., Nikpay, S. (2023). Ten health policy challenges for the next ten years. *Health Affairs Scholar*. Retrieved from: <https://academic.oup.com/healthaffairsscholar/article/1/1/qxad010/7203673>.

of 37,800 to 124,000 physicians in the U.S. by 2034, which will impact both primary and specialty care.²⁸ Access issues are anticipated to increase in coming years. Growing shortages of both nurses and doctors are being driven by several factors, including population growth, the aging U.S. population requiring higher levels of care, provider burnout (physical, mental and emotional exhaustion) made worse by the COVID-19 pandemic, and a lack of clinical training programs and faculty – particularly for nurses.²⁹ The aging of the current physician workforce is also driving anticipated personnel shortages. In Maryland, 35.8% of actively practicing physicians were over the age of 60 in 2020.³⁰ Access is also impacted by the number of actively practicing physicians overall. In 2020, there were just 7,075 primary care physicians in Maryland, with 23,791 physicians actively practicing overall.³⁰

The ability to access healthcare is not evenly distributed across groups in the population. Groups who may have trouble accessing care include the chronically ill and disabled (particularly those with mental health or substance use disorders), low-income or homeless individuals, people located in certain geographical areas (rural areas; tribal communities), members of the LGBTQIA+ community, and certain age groups – particularly the very young or the very old.³¹ In addition, individuals with limited English proficiency (LEP) face barriers to accessing care, experience lower quality care and have worse outcomes for health concerns. LEP is known to worsen health disparities and can make challenges related to other SDoH (access to housing, employment, etc.) worse.³² Both primary and secondary data resources analyzed for this report highlight the need for greater access to health services within Baltimore County.

Access to care and overall community health are affected by SDoH, which have a critical impact on health needs and outcomes. The World Health Organization defines SDoH as the non-medical factors that influence health outcomes. These are the conditions in which people are born, grow, work, live and age, and the wider set of external forces and systems shaping the conditions of daily life. Examples of SDoH that can influence health equity in positive or negative ways include income, education, unemployment/job security, food insecurity, housing, early childhood development, social inclusion or non-discrimination, structural conflict and access to affordable, high-quality healthcare.³³

As seen in Figure 4.7, the American Hospital Association categorizes SDoH factors into the following domains: food, housing, transportation, health behaviors, violence, education, social support and employment.

²⁸ Source: Association of American Medical Colleges (AAMC) (2021). *The complexities of physician supply and demand: Projections from 2019 to 2034*. Retrieved from:

<https://www.aamc.org/media/54681/download?attachment>.

²⁹ Source: University of Southern California Keck School of Medicine (2023). *A Public Health Crisis: Staffing Shortages in Health Care*. Retrieved September 14th, 2023, from <https://mphdegree.usc.edu/blog/staffing-shortages-in-health-care>.

³⁰ Source: AAMC (2021). *Maryland physician workforce profile*. Retrieved January 24, 2024, from <https://www.aamc.org/media/58211/download>

³¹ Source: Joszt, L. (2018). 5 Vulnerable Populations in Healthcare. *American Journal of Managed Care*. Retrieved September 14th, 2023 from <https://www.ajmc.com/view/5-vulnerable-populations-in-healthcare>.

³² Source: Espinoza, J. and Derrington, S. (2021). How Should Clinicians Respond to Language Barriers That Exacerbate Health Inequity? *AMA Journal of Ethics*. Retrieved from: <https://journalofethics.ama-assn.org/article/how-should-clinicians-respond-language-barriers-exacerbate-health-inequity/2021-02>.

³³ Source: WHO (2023). *Social Determinants of Health*. Retrieved September 14th, 2023, from https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1.

Figure 4.7: Social Determinants of Health

Source: American Hospital Association

SDoH are not experienced equally by all people and are often linked to one another. The impacts of SDoH on populations are profound, can persist across generations, and often drive health inequities based on race, ethnicity or socioeconomic status. When health systems use their resources to address SDoH among patient populations, it can strengthen the quality of the care they provide while reducing health inequities.³⁴ Evidence-based SDoH programs that can be adopted by hospitals or health systems that may reduce healthcare costs and improve outcomes include supportive housing for individuals with chronic health conditions, food and nutrition access, patient transportation services, cash payment or income support for individuals with disabilities, and multidisciplinary patient care coordination teams.³⁵ Research published in JAMA suggests that collecting patient data on social adversity and health-related social needs (HRSN) can not only be used to develop better trust and support for their patients but can also help identify broader social needs in the community.³⁶

Throughout the primary and secondary data findings below, various SDoH emerged as areas of priority need that impact Baltimore County residents' ability to live healthy lives or to access medical care. Specifically, based on these findings, key concerns include dynamics related to transportation, food insecurity, housing and homelessness, and neighborhood safety and violence. County health leaders will continue to evaluate their potential to play a role in impacting these domains in the years to come.

³⁴ Source: American Medical Association (2022). *What are social determinants of health?* Retrieved September 14th, 2023, from <https://www.ama-assn.org/delivering-care/health-equity/what-are-social-determinants-health>.

³⁵ Source: Whitman, A., De Lew, N., Chappel, A., Aysola, V., Zuckerman, R. & Sommers, B. (2022). *Addressing Social Determinants of Health: Examples of Successful Evidence-Based Strategies and Current Federal Efforts*. Retrieved from <https://aspe.hhs.gov/sites/default/files/documents/e2b650cd64cf84aae8ff0fae7474af82/SDOH-Evidence-Review.pdf>.

³⁶ Chen, A., Gwynn, K. & Schmidt, S. (2023). Addressing health-related social needs in the clinical, community, and policy domains. *JAMA Network*. Retrieved January 31, 2024 from: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2804105>.

Secondary Data Findings

Various factors contribute to healthcare access, not all of which were determined to be of high need for Baltimore County, as detailed in Appendix 4. Relative to the state of Maryland U.S., Baltimore County performs well on a number of access to care metrics, including the ratios of population to primary care physicians, non-physician primary care providers, and mental health providers. However, Baltimore County has a number of large hospitals and health systems located within its borders, so these ratios suggest that many people who reside outside the county travel there to receive care. Access to care may not be equitable across all county populations, particularly those with socioeconomic or transportation-related challenges. The total population ratio per primary physician worsened from 2020 to 2023 in Baltimore County, growing from 990 to 1,100. Baltimore County also had a higher ratio of population to dental providers when compared to the state, suggesting that some residents may have difficulty caring for their oral health.

While Baltimore County performed better than the state of Maryland on preventive health measures such as annual mammograms or flu vaccines for the Medicare population, it performed worse than the state for preventable hospital stays. A high rate of hospital stays for health conditions that are typically treated in an outpatient situation, such as diabetes, suggests that community members are not able to consistently access primary care, which could help them manage their condition without being admitted to the hospital.

Table 4.4: Access to Care Indicators

Indicator	Baltimore County	Baltimore City	Maryland	United States
Total Population per Primary Care Physician	1,100	800	1,130	1,310
Total Population per non-Physician Primary Care Provider	770	320	770	810
Total Population per Dentist	1,300	1,210	1,260	1,380
Total Population per Mental Health Provider	260	170	310	340
Annual Percentage of Medicare Enrollees Receiving Mammograms	41%	36%	37%	37%
Annual Percentage of Medicare Enrollees Receiving Flu Vaccines	59%	51%	55%	51%

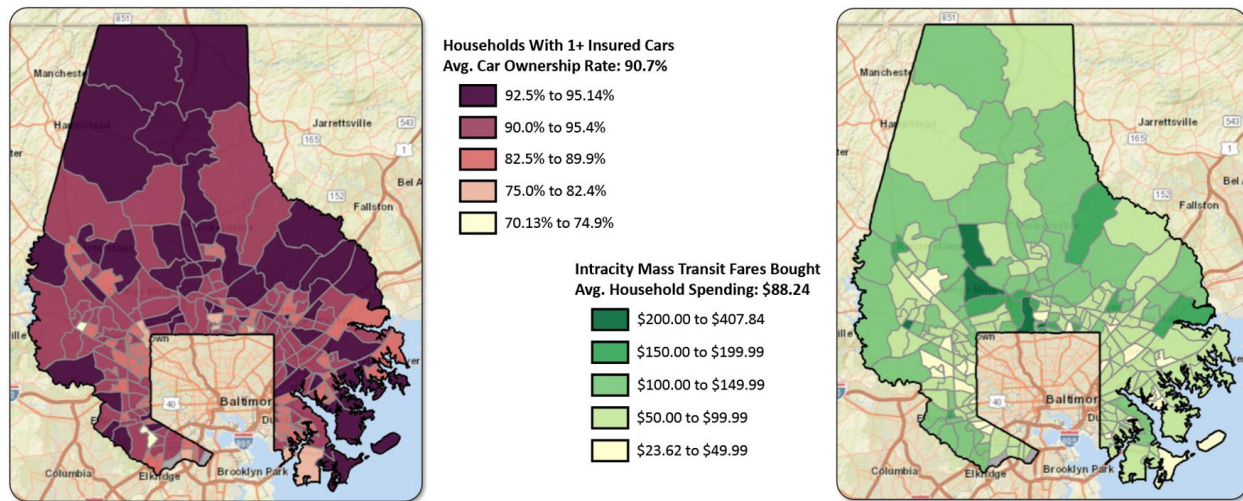
As previously described in the Context and National Perspective section above, SDoH have an impact on individual health status, and many SDoH factors can influence a person’s ability to access healthcare. A lack of access to reliable transportation or transit is a key barrier that can prevent someone from being able to see their provider, and can influence their ability to thrive in other areas of their life as well (such as getting to school or work). Baltimore County has high proportions of the population commuting long distances to work and driving alone to do so. While not a direct indicator of healthcare access issues, individuals who must travel long distances for work may also need to travel significantly for other essential needs, including medical care. Baltimore County also has higher traffic volume when compared to the

state of Maryland, which has the potential to impact health via air pollution and overall quality of life as well.

Table 4.5: Social Determinants of Health – Transportation Indicators				
Indicator	Baltimore County	Baltimore City	Maryland	United States
Driving Alone to Work	75%	58%	70%	73%
Long Commute- Driving Alone	45%	43%	50%	37%
Traffic Volume	835	1,443	695	505

Car ownership is not uniform across the county. Households located further from the city border are most likely to own at least one vehicle. As seen in Figure 4.8, low rates of car ownership are correlated with higher spending on mass transit. Baltimore County residents who are reliant on mass transportation to get around may be limited as to where they can seek care based on where bus or other transit lines are available.

Figure 4.8: Percentage of Car Ownership and Amount of Mass Transit Spending



Access to healthy food is a key SDoH that directly impacts an individual’s health status. One in ten Baltimore County residents is food insecure – higher than the state of Maryland but lower than Baltimore City or the U.S. overall. In addition, just over half of children in Baltimore County are eligible for free or reduced lunch programs. Families with limited resources may find it difficult to provide nutritious meals to their children at home, which could contribute to chronic health conditions later in life.

Table 4.6: Social Determinants of Health – Food Insecurity Indicators				
Indicator	Baltimore County	Baltimore City	Maryland	United States
Food Environment Index	8.3	7.5	8.7	7
Food Insecurity	10%	16%	9%	12%
Limited Access to Healthy Foods	4%	2%	4%	6%
Children Eligible for Free or Reduced Lunch	52%	66%	45%	53%

Access to safe, affordable housing is another SDoH that can contribute to overall health status. Individuals who struggle to afford housing may be forced to make difficult choices between paying housing bills or paying for needed medications or health services. While Baltimore County has a higher proportion of affordable housing and a lower proportion of people living with severe housing problems compared to the city or the state, it has a slightly lower proportion of homeowners compared to Maryland overall.

Table 4.7: Social Determinants of Health – Housing and Homelessness Indicators				
Indicator	Baltimore County	Baltimore City	Maryland	United States
Percentage of Households with Severe Housing Problems	15%	21%	16%	17%
Percentage of Owner-Occupied Housing	66%	48%	67%	65%
Percent of Renters with Severe Housing Cost Burden	14%	20%	14%	14%
Percentage of Sold Housing Units Considered Affordable	64.1%	91.9%	56.7%	N/A

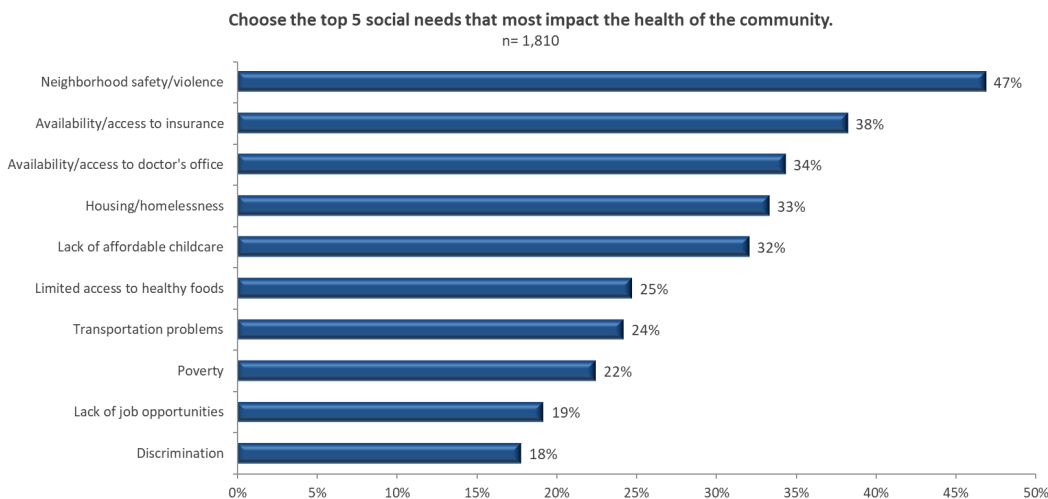
Neighborhood safety and violence is another significant SDoH concern in Baltimore County. All countywide safety indicators were higher than state and national levels, with the exception of motor vehicle crash deaths. Rates of firearm fatalities and deaths due to injuries were both higher than the rate for the state of Maryland, although significantly lower than in Baltimore City. Notably, the juvenile arrest rate in Baltimore County is much higher than the rates in the city, the state or the U.S. overall.

Table 4.8: Social Determinants of Health – Neighborhood Safety and Violence Indicators				
Indicator	Baltimore County	Baltimore City	Maryland	United States
Injury Mortality (per 100,000 population)	109	200	88	76
Homicides (per 100,000 population)	9	43	9	6
Firearm Fatalities (per 100,000 population)	13	44	12	12
Motor Vehicle Crash Deaths (per 100,000 population)	8	9	9	12
Juvenile Arrests per 1,000 Juveniles	39	25	27	24

Primary Data Findings – Community Member Survey

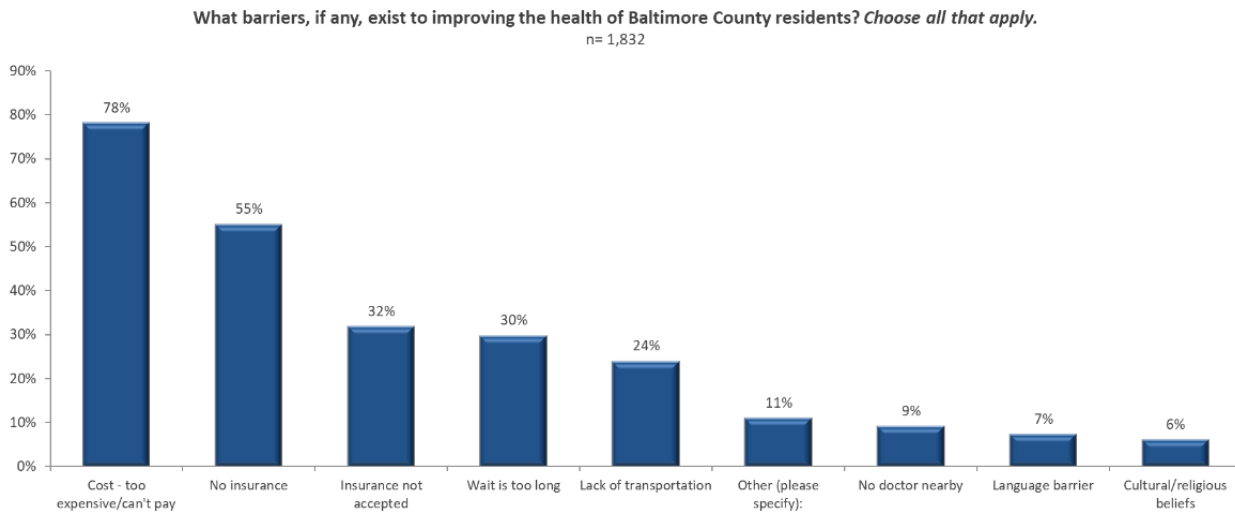
Respondents to the community member survey identified several social needs related to access to care and other SDoH factors. Availability and access to health insurance (38%) and the doctor’s office (34%) were identified among the top five social needs impacting community health. Neighborhood safety and violence was identified as the top social need impacting community health (47%). Figure 4.9 shows high levels of concern related to multiple SDoH and access factors, such as access to healthy food, housing and homelessness, and neighborhood safety.

Figure 4.9



Community members were also asked to identify top barriers to improving and accessing care, as seen in Figure 4.10 below. Cost of care (78%) and inability to obtain insurance (55%) were the top two barriers to care. The overall cost of healthcare was identified as a consistent barrier in both the key leader survey and the community member survey.

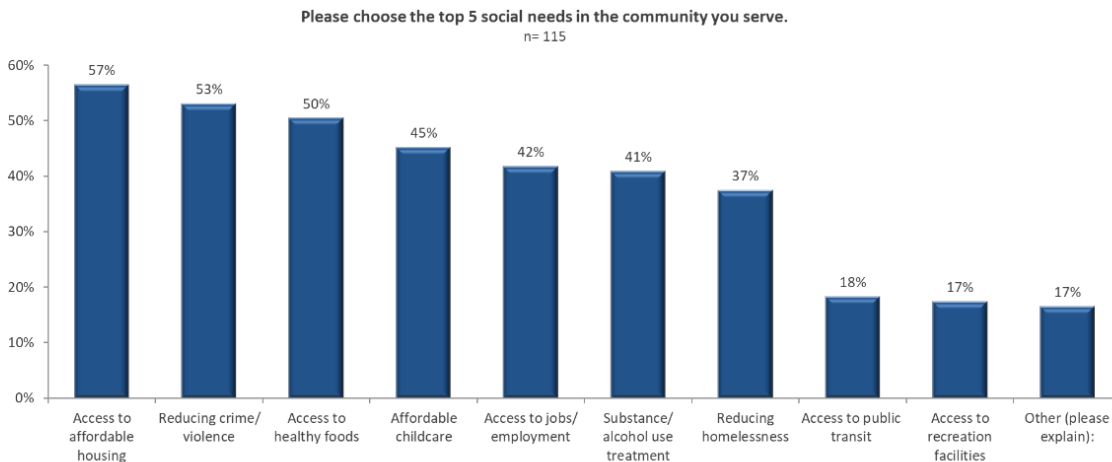
Figure 4.10



Primary Data Findings – Key Leader Survey

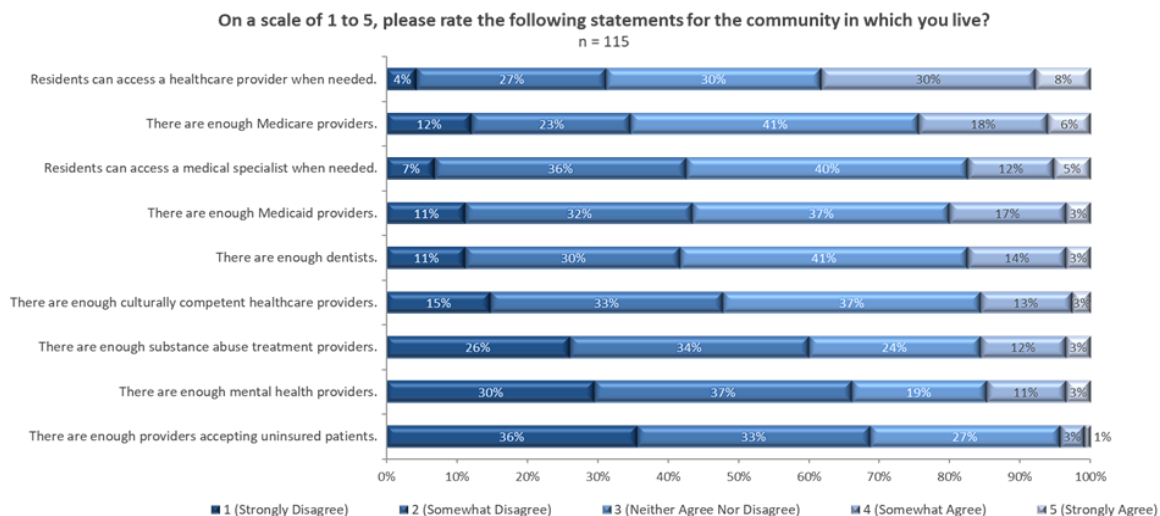
Nearly half (45.2%) of respondents to the key leader survey ranked access to care among the highest priority health needs in Baltimore County, while 37.4% identified the need for primary and preventive healthcare as a top concern. Access to care and its impact on other SDoH factors was a significant focus when respondents were asked to identify the top social needs in Baltimore County as well. The most significant social need identified by key leaders was access to affordable housing at 57%. Reducing crime and violence was noted as well, with 53% of respondents identifying that need as a priority. While access to healthcare was not specifically identified as a top social need, many of the top social needs have the potential to impact an individual’s ability to access high quality medical care. This includes access to jobs or employment, affordable childcare and access to public transit. Other top identified social concerns that medical providers may be able to impact through referrals to community resources include access to healthy foods and services to address homelessness.

Figure 4.11



Overall, a high percentage of respondents (38%) agreed that residents could access a healthcare provider when needed. However, respondents did not find this to be consistent across all provider or patient types. Over half of respondents (69%) felt that there were not enough providers that accepted uninsured patients. Just under half (43%) of key leaders felt that Baltimore County residents were not able to access a medical specialist when needed, and the same percentage of respondents also felt that there were not enough providers serving the Medicaid population.

Figure 4.12



Respondents were also asked to identify any barriers to improving the health of residents in the communities they serve, as seen in Figure 4.13. Nearly three-quarters (72%) of respondents identified the cost of care as a top barrier to community health improvement. This was followed by health literacy (63%) and appointment availability (54%). Transportation was also noted as a barrier by more than half of respondents, underscoring the impact this particular SDOH has on health and well-being.

Figure 4.13

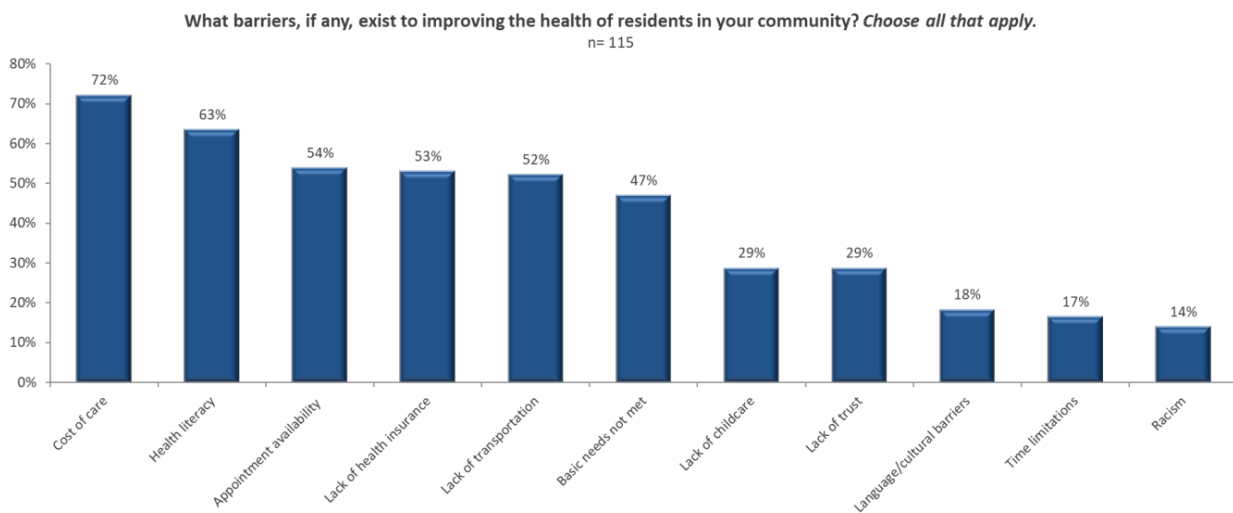
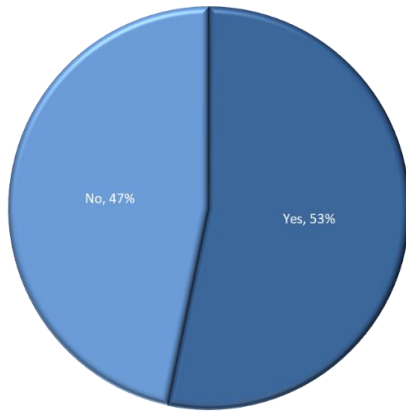


Figure 4.14

Do you feel that the residents of the community you serve are health literate? n = 115

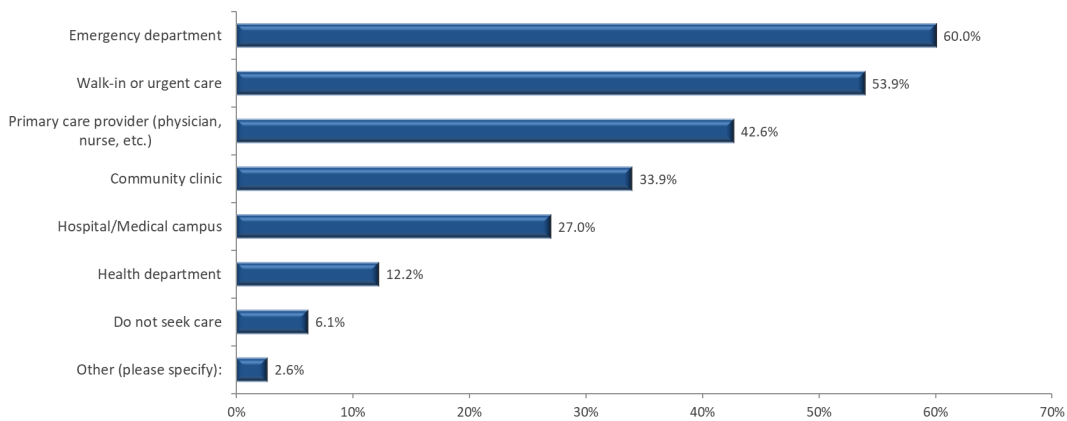


Health literacy was identified as the second highest barrier to improving community health in the key leader survey. As a follow up question, key leaders were asked whether they felt that the residents of the community they serve were health literate, or able to understand health-related information when it is presented to them. Nearly half of respondents (47%) indicated that they felt their community members were not able to understand health-related information, as seen in Figure 4.14.

Finally, key leaders were asked to identify the most common settings where community members seek care. Figure 4.15 shows that the majority of respondents (60%) selected the emergency department as the most common location of care. The second most common was walk in/urgent care, at 53.9%. This aligns with community survey results that noted a lack of appointment availability and the high cost of care as major barriers. Individuals cannot be turned away at emergency departments for care, and many low-income individuals may not be able to see a primary care provider in a timely fashion, or may lack health insurance to access primary care in the first place.

Figure 4.15

Members of your community typically seek medical care through... Please select all that apply n = 115

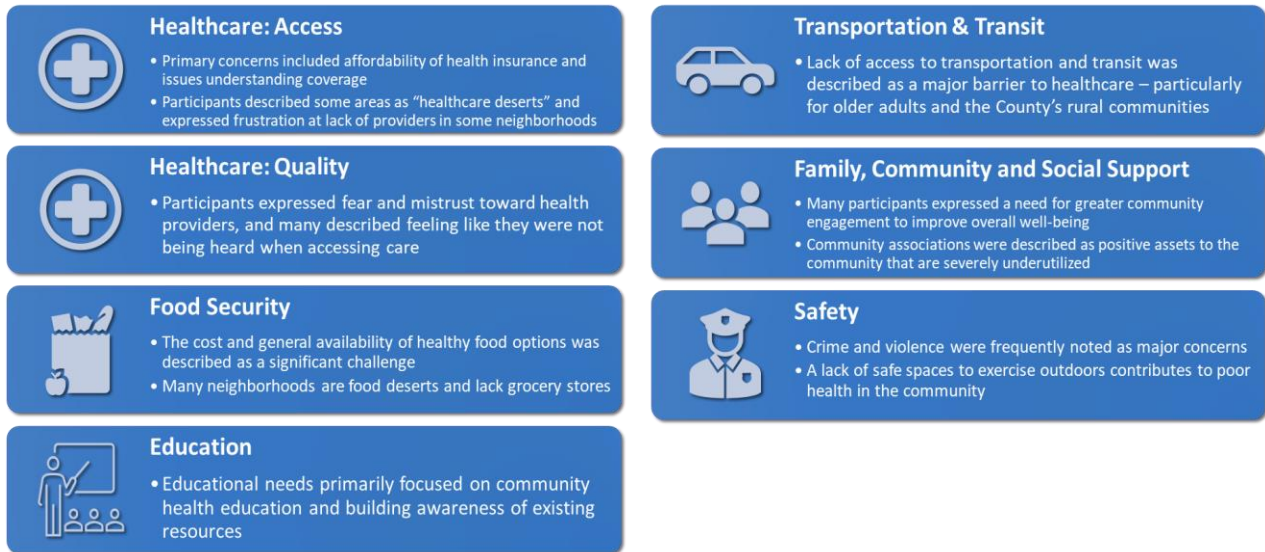


Primary Data Findings – Focus Groups

Focus groups conducted during the CHNA process identified access to care and quality of care as two significant health factors impacting Baltimore County residents. Other SDoH factors that may impact health or the ability to access healthcare were also noted, such as housing and homelessness, transportation, community health education, food security, and family, community, and social support.

Seven specific needs related to access to care or SDoH were identified through the focus groups as priority concerns for the community. Figure 4.16 below illustrates the major focus group themes related to each health or social need. Many of these needs were cross-identified through the key leader and community surveys as well.

Figure 4.16: Key Focus Group Findings



Focus group participants were asked to describe some of the reasons members of their community may not seek out healthcare, even when it’s needed. Three key themes emerged around these topics: access and availability to transportation; obtaining and maintaining health insurance; and the ease in scheduling appointments or seeing their provider in a timely manner. Participants cited a lack of access to transportation as a theme when discussing their inability to not only reach medical services, but to access other supportive services who can provide health education or additional resources. Community members also expressed concerns around accessing, obtaining, or ensuring that their insurance was enough to cover necessary medical expenses, and understanding how to access their benefits or find financial assistance to pay medical bills. A third concern raised by community members was around the difficulty in not only getting an appointment, but how long they needed to wait to see their provider. Participants also described SDoH as impacting community members’ ability to access care. Food insecurity was a particular concern, as the cost of food and other necessities may force individuals to de-prioritize healthcare to meet their basic needs.

Participants were also asked about their experiences with the medical services in their community. Various concerns were raised, including frustration at receiving an automated response when they call their provider, instead of receiving assistance from a physical person. Other concerns were around the amount of time spent with providers and the thoroughness of the exams they received. Community members generally expressed happiness with the central location of their providers.

In addition to transportation, focus group participants noted other SDoH challenges that directly impact their ability to access healthcare and live healthy lives. The high cost of healthy food was described as a driver of poor health in the community, as well as an important basic need that may force people to make difficult choices between paying for food or paying for prescriptions or medical care. Community members

also described a need for increased levels of family, community and social support as a way to improve overall community health and well-being. Some participants noted that their neighborhoods did not feel as tight knit as they had in the past and felt that this lack of connection contributed to negative mental health impacts or social isolation for vulnerable people. Finally, many community members who participated in the focus groups described community violence as a significant challenge that impacts community members' ability to walk or exercise outdoors, and as a contributor to high levels of stress that impact overall health and well-being.

Community members who participated in focus groups were asked how they best thought the above issues could be addressed. Multiple suggestions were provided, such as adjusting income qualifications for assistance programs to align with the cost of living, creating better navigation services to connect community members with resources, providing and advertising in-home visits, and standardizing more frequent welfare and support checks for vulnerable community members.

CHAPTER 4 | HEALTH RESOURCE INVENTORY

The following section details existing resources, facilities, and programs throughout Baltimore County.

Health Resources

The list of resources below is representative of the services available in Baltimore County; however, this list is not exhaustive. Additionally, while the resources, facilities, and programs listed in this section have been categorized into common groups, these organizations and programs may offer additional services as well. Please note that while the county overall may be adequately served by existing capacity in some areas, not every area of the county is equally served, and the need for additional resources may be greater in one geography as compared to another.

As shown, this health resource inventory was compiled based on input and information from all Steering Committee partners and have been categorized into the following areas, including Healthcare Facilities, Home-based Health Services, Other Healthcare Services, and Community Services.

Healthcare Facilities

- Baltimore County Department of Health – Offers a variety of health services for the general public and specialty groups, including general health services, children’s health services, senior health services, uninsured health services, and women’s health services. Services are provided via four clinical bureaus.
- Northwest Hospital of LifeBridge Health – 231-bed hospital offering a variety of services at its hospital location as well as nearby outpatient facilities offering service such as outpatient surgery, adult day care, and physical rehabilitation.
- Sheppard Pratt – Provider of mental health, substance use, special education, developmental disability, and social services offering services in inpatient, outpatient, and virtual settings.
- Greater Baltimore Medical Center Healthcare – 228-bed medical center offering a variety of services at its hospital and main campus medical office buildings as well as primary care offices throughout the community. GBMC also provides and operates integrated behavioral health services, The Geckle Diabetes and Nutrition Center, and the Bariatric Surgery and Comprehensive Obesity Management Program.
- University of Maryland St. Joseph Medical Center – 218-bed hospital offering a variety of services at its hospital and associated practices. UM SJMC also offers many community programs to support families, chronic disease and pain management, physical activity and fall prevention. Additionally, the Barbara Posner Wellness and Support Center offers many support services for cancer patients. St. Clare Medical Outreach is a devoted team that provides primary care and health education to those who have no access to healthcare.
- MedStar Franklin Square Medical Center – 338-bed hospital offering a variety of services at its hospital location as well as primary care, family health, diabetes prevention, nutrition, and smoking cessation services in outpatient settings. Additionally, MedStar Health operates numerous Diabetes Institute locations, the MedStar Health Research Institute, and various behavioral health and outpatient psychiatry services. MedStar Health also offers numerous support groups including those focused on living well with chronic pain, diabetes, and stroke.

Home-based Health Services

Organization	Example Service Offerings
Affiliated Santé Group’s Baltimore County Mobile Crisis Team	Dispatches to assist in crisis events related to mental health
Baltimore County Department of Aging	Many evidence-based programs such as Stepping On Fall Prevention, BeCAUSE, senior meals
Baltimore County Department of Health	Community Health Workers, Nurse home visiting case management
Baltimore County Department of Social Services	In-home aides and case management for specific populations, guardianship unit
Meals on Wheels of Central Maryland	Home-delivered meals, Grocery Assistance Program
Sheppard Pratt	In-home medication management

Other Healthcare Services

Other healthcare services are offered by the following organizations.

Organization
Baltimore County Department of Health
Baltimore County Department of Social Services
Baltimore County Public Schools
Baltimore Medical Systems, Inc.
Center for Family Success
Chase Brexton
Gilchrist
House of Ruth
Maryland Department of Health
Nueva Vida
Planned Parenthood
St. Clare Medical Outreach
Total Health Care
Towson University Institute for Well Being

Community Services

Additional community services are offered by the following organizations.

Organization
Alzheimer's support group
American Cancer Society
American Diabetes Association
American Heart Association
Assistance Center of Towson Churches
Baltimore County Communities for the Homeless
Baltimore County Public Library

Organization
Baltimore County Recreation and Parks
Baltimore County Senior Centers
Baltimore Hunger Project
Baltimore Jobs Program
BCPS Allied Health Magnets
CCBC
Community Assistance Network
Epiphany Community Services
Food distribution sites (various)
Gilchrist Grief Counseling and Support Resources
Harbel Prevention and Recovery Center
Healthy Babies Collaborative
Healthcare Access Maryland
Healthcare for the Homeless
Humanim
Hungry Harvest
League for People with Disabilities
MD Food Bank
Mental Health Association of Maryland
Mosaic Community Services
Moveable Feast
NAMI
Orokawa Y at Towson
Pro Bono Counseling
Southeast Network
Streets of Hope
Student Support Network
United Way

CHAPTER 5 | NEXT STEPS

The CHNA findings are used to develop effective community health improvement strategies to address the priority needs identified throughout the process. The next and final step in the CHNA process is to develop community-based health improvement strategies and action plans to address the priorities identified in this assessment. The organizations making up the Steering Committee will leverage information from this CHNA to develop implementation and action plans for their local community, while also working together with other members of the Steering Committee to ensure the priority need areas are being addressed in the most efficient and effective way. The Steering Committee believes that the most effective strategies will be those that have the collaborative support of community organizations and residents. The strategies developed will include measurable objectives through which progress can be measured.

APPENDICES

APPENDIX 1 | SUMMARY OF PRIOR CHNA IMPLEMENTATION PLANS

A CHNA is an ongoing process that begins with an evaluation of the previous CHNA. In 2021, Baltimore County completed its previous assessment. Associated implementation strategies focused on three priority areas, as listed below:

Priority Health Need Areas

- Behavioral Health, including Mental Health and Substance Use Disorders
- Physical Health
- Health Disparities

Each member organization of the Steering Committee developed goals and implementation plans to address these priority health needs. Below are brief summaries of each organization's 2021-2024 CHNA implementation plans.

Baltimore County Department of Health

BCDH's vision is healthy people living, working and playing in Baltimore County. To achieve this, BCDH works to promote health and well-being among individuals and families; provide quality health, housing and social services; prevent disease through education, advocacy, outreach and connection to resources and treatment; administers entitlement and benefits programs; conducts investigations and inspections; and offers clinical and case management services.

The BCDH fiscal year (FY) 2021 Community Health Improvement Plan (CHIP) addresses the following priority areas: Behavioral Health (including Mental Health and Substance Use Disorders (SUDs)), Physical Health/Chronic Disease and Health Disparities. Due to ongoing challenges related to the COVID-19 pandemic, some planned action items still need to be conducted. However, BCDH has continued to provide and increased harm reduction services to individuals with SUDs along with enhanced crisis response services for those with mental health disorders. The Health Department has increased services for those with chronic disease with the implementation of a chronic disease program focusing on hypertension and diabetes. To address health disparities, the chronic disease program provides screening for hypertension and diabetes to those at highest risk, addressing the disparity. The Department implemented a TOPS (Take Off Pounds Sensibly) program in conjunction with a predominantly African American church. In addition, the Department is participating in a countywide task force for New Americans. The Department continues to expand the use of bilingual staff and enhance cultural competencies.

Greater Baltimore Medical Center Healthcare

GMBC offers a variety of services through its three work systems: a 228-bed licensed facility; GBMC Health Partners, a group of 30+ physician practices; and Gilchrist, dedicated to geriatric primary care, hospice,

and bereavement counseling. GBMC also provides and operates integrated behavioral health services, The Geckle Diabetes and Nutrition Center, and the Bariatric Surgery and Comprehensive Obesity Management Program.

The GBMC 2022-2024 CHNA Implementation Plan addressed the following priority need areas: Health Disparities, Behavioral Health (including mental health and SUDs), and Physical Health. Activities undertaken to address health disparities included providing healthy meals to food-insecure patients through Moveable Feast and an aging-in-place initiative developed with Maryland Volunteer Lawyers Service. To address behavioral health, GBMC and Sheppard Pratt provided integrated behavioral health at all primary care practices through the Collaborative Care Model; partnered with organizations of the CHNA Committee and the Baltimore County Police Department to promote National Prescription Drug Takeback Day events; and assisted with community engagement initiatives to implement the Greater Baltimore Regional Integrated Crisis System to expand the capacity of mobile crisis teams and community-based providers to reduce police interaction and overreliance on emergency departments. Physical health-focused initiatives included collaborative efforts to improve the built environment, Walk with a Doc events, promotion of pre-diabetes risk assessments for patients, and providing affordable healthy produce to patients, staff and the community through Hungry Harvest.

MedStar Franklin Square Medical Center

MFSMC is located in eastern Baltimore County, and offers comprehensive, technology-based surgical services, including the latest, most innovative treatment for patients with various medical conditions. Its specialty service lines include medicine, oncology, neurosciences, cardiology, obstetrics and gynecology, orthopedics, neonatal intensive care, behavioral health, and ambulatory services.

MedStar's 2021 CHNA process identified three overarching community health needs: health and wellness, access to care and services, and SDoH. The hospitals conduct many community programs related to chronic disease including diabetes prevention and management classes, blood pressure screenings, tobacco cessation programming, and stroke support groups. To address behavioral health issues, MedStar Health has expanded the SBIRT (Screening, Brief Intervention & Referral to Treatment) strategy in emergency department and primary care settings and embedded Peer Recovery Coaches on hospital care teams. Relative to maternal and child health, the hospital has supported and coordinated an expanded Healthy Babies Collaborative and increased its Birth and Family education scope. To better provide access to care and services, MedStar Health has included mental health services as part of its primary care model and conducted social needs screenings and support linkages as part of care delivery. It has partnered with outside organizations to address social determinants of health (SDoH), including the MedStar Health Uber transportation program and workforce development initiatives. MedStar Health assumed the full cost for continuing the Public Health Workforce Support for Disadvantaged Areas post-collaboration grant. To address food access challenges, the Food Rx program is now available through three hospitals with added community partnerships.

Northwest Hospital of LifeBridge Health

Northwest Hospital is a nonprofit hospital with 367 private rooms, which has been dedicated to the needs of the greater northwest Baltimore community for over 50 years, caring for the citizens of Baltimore County, western Baltimore City, Carroll County, Howard County and beyond. Northwest Hospital's 2021-

2024 implementation plan addressed the following priority areas: chronic heart disease, diabetes, mental health and SUDs, community health and wellness education, health disparities, and workforce development.

To address these respective issues, LifeBridge and Northwest Hospital staff implemented virtual and in-person chronic disease management education classes, increased staff to expand reach into surrounding communities, provided staff to assist patients with navigating and applying for Medicaid health insurance, utilized Sinai Hospital of Baltimore's vocational services and workforce readiness program (VSP) for training and workforce development services, and created new partnerships while strengthening existing ones with community based organizations--including with local faith-based organizations--to improve access and trust for patients needing medical and behavioral health services.

Some examples of programs and services implemented in the Northwest service area supporting community health include:

- *SBIRT Program:* Peer recovery coaches stationed in the hospital's Emergency Department who connect SUD patients with treatment and community resources. In FY23, Northwest Hospital provided over 8,000 screenings.
- *Cardiovascular Telemonitoring Program:* Remote patient monitoring program to improve the quality of care, patient outcomes, and reduce hospital utilization for patients with chronic diseases by improving patient-provider communication, improving coordination of care, and improving time of follow up with a Primary Care Provider. In FY23, Northwest enrolled 102 patients in the GetWell Loop Chronic Disease Management program.
- *Community Care Coordination:* Care management services provided to high-risk community members. This program includes collaboration with internal and external mental health practices and referrals to community support resources. The initiative also coordinates transportation to medical appointments and social services. In FY23, this service provided 16,559 encounters.
- *Community Pastoral Outreach:* Community Pastoral Outreach provides supportive leadership with members of the faith community within Northwest's catchment area and beyond. This program assists congregations (all faiths) to develop health and wellness ministries; provides community pastoral care with participants of established programs; helps faith communities develop workshops, seminars, classes in relation to faith and health, along with specific health concerns; and engages in faith relations (e.g., with local governments, nonprofits, colleges and universities) throughout LifeBridge service areas.

University of Maryland St. Joseph Medical Center

UM SJMC is a 221-licensed bed, Catholic acute care hospital located in Towson, Maryland. UM SJMC is a member of the University of Maryland Medical System, a multi-hospital system with academic, community and specialty service missions reaching every part of the state and beyond.

In its 2022–2024 Community Health Improvement Implementation Plan, UM SJMC outlined a number of key objectives and action items to address each of the main priority areas identified by the county's 2020-

2021 CHNA. UM SJMC offered community health screenings for a variety of conditions, including breast cancer, cervical cancer, blood pressure, type 2 diabetes and stroke or abdominal aortic aneurysm, as well as bone density and body composition screenings. UM SJMC also hosted community events, including blood drives in partnership with the Red Cross, a community market featuring fresh fruits and vegetables, wellness fairs, vaccination clinics, and virtual community health education events. To address chronic health needs in the community, UM SJMC offered its Chronic Disease Self-Management Program and Prevent T2 – a CDC-developed diabetes prevention program. UM SJMC also completed the development of a new, evidence-based behavioral health curriculum, which will launch in Spring 2024.

APPENDIX 2 | COUNTY DEMOGRAPHIC AND SOCIOECONOMIC DETAIL

Detailed information regarding the demographics and socioeconomics of Baltimore County can be found in the tables below.

County Demographics

Age and Total Population

The table below shows the total population in Baltimore County, Baltimore City, Maryland and the United States.

Table A2.1: Total Population, 2023				
	Baltimore County	Baltimore City	Maryland	United States
Population	859,710	573,794	6,259,408	337,470,185

Source: ESRI 2023

The table below shows the percentage of Baltimore County, Baltimore City, Maryland and United States residents by age cohort.

Table A2.2: Age Distribution, 2023				
	Baltimore County	Baltimore City	Maryland	United States
Percentage below 15	16.4%	16.8%	17.6%	18.0%
Percentage between 15 and 44	38.9%	43.7%	39.2%	39.6%
Percentage between 45 and 64	24.9%	23.0%	25.7%	24.6%
Percentage 65 and older	19.7%	16.5%	17.5%	17.8%

Source: ESRI 2023

Sex

The table below shows the total population in Baltimore County, Baltimore City, Maryland and the United States by sex.

Table A2.3: Sex Distribution, 2023				
	Baltimore County	Baltimore City	Maryland	United States
Female	52.2%	52.8%	51.3%	50.6%
Male	47.8%	47.2%	48.7%	49.4%

Source: ESRI 2023

The table below shows the percentage and total population of Baltimore County, Baltimore City, Maryland and the United States by sex and age cohort.

Table A2.4: Sex and Age Distribution, 2023								
	Baltimore County		Baltimore City		Maryland		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Total	859,710	100.0%	573,794	100.0%	6,259,408	100.0%	337,470,185	100.0%
0-14 years	141,397	16.4%	96,327	16.8%	1,104,084	17.6%	60,750,786	18.0%
15-44 years	334,433	38.9%	250,740	43.7%	2,451,298	39.2%	133,591,630	39.6%
45-65 years	214,154	24.9%	131,800	23.0%	1,606,433	25.7%	83,061,508	24.6%
65+ years	169,726	19.7%	94,927	16.5%	1,097,593	17.5%	60,066,261	17.8%
Males	411,367	47.8%	270,691	47.2%	3,046,001	48.7%	166,821,938	49.4%
0-14 years	71,977	17.5%	48,640	18.0%	563,396	18.5%	31,023,901	51.1%
15-44 years	164,997	40.1%	120,887	44.7%	1,223,965	40.2%	67,793,310	50.7%
45-65 years	101,173	24.6%	62,390	23.0%	773,251	25.4%	40,903,399	49.2%
65+ years	73,220	17.8%	38,774	14.3%	485,389	15.9%	27,101,328	45.1%
Females	448,343	52.2%	303,103	52.8%	3,213,407	51.3%	170,648,247	50.6%
0-14 years	69,420	15.5%	47,687	15.7%	540,688	16.8%	29,726,885	48.9%
15-44 years	169,436	37.8%	129,853	42.8%	1,227,333	38.2%	65,798,320	49.3%
45-65 years	112,981	25.2%	69,410	22.9%	833,182	25.9%	42,158,109	50.8%
65+ years	96,506	21.5%	56,153	18.5%	612,204	19.1%	32,964,933	54.9%

Source: ESRI 2023

Race

The table below shows the total population in Baltimore County, Baltimore City, Maryland and the United States by race.

Table A2.5: 2023 Racial Distribution								
	Baltimore County		Baltimore City		Maryland		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
White Non-Hispanic	431,552	50.2%	146,924	25.6%	2,867,623	45.8%	191,314,266	56.7%
Black Non-Hispanic	260,766	30.3%	332,377	57.9%	1,834,049	29.3%	40,898,542	12.1%
Asian	57,506	6.7%	21,210	3.7%	439,514	7.0%	20,811,620	6.2%
American Indian & Alaska Native	1,921	0.2%	1,270	0.2%	11,977	0.2%	2,284,715	0.7%
Native Hawaiian/ Other Pacific Islander	255	0.0%	152	0.0%	2,635	0.0%	643,202	0.2%

Source: ESRI 2023

Ethnicity

The table below shows the total population in Baltimore County, Baltimore City, Maryland and the United States by ethnicity.

Table A2.6: 2023 Ethnic Distribution								
	Baltimore County		Baltimore City		Maryland		United States	
	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total	Count	Pct. of Total
Hispanic	66,577	7.7%	47,869	8.3%	788,675	12.6%	65,536,136	19.4%
Non-Hispanic	793,133	92.3%	525,925	91.7%	5,470,733	87.4%	271,934,049	80.6%

Source: ESRI 2023

Language

The table below shows the total population in Baltimore County, Baltimore City, Maryland and the United States by language spoken at home.

Table A2.7: 2022 Language Spoken at Home				
	Baltimore County	Baltimore City	Maryland	United States
English Only	85.8%	89.0%	79.3%	78.0%
Spanish	4.0%	4.7%	8.9%	13.3%
Indo-European Languages	4.5%	2.5%	4.7%	3.8%
Asian and Pacific Islander Languages	2.7%	1.9%	3.9%	3.6%
Other Languages	3.0%	1.8%	3.2%	1.2%

Source: ACS 2022

Socioeconomic Detail

Household Income

The table below shows the median household income of Baltimore County, Baltimore City, Maryland and the United States.

Table A2.8: 2023 Median Household Income				
	Baltimore County	Baltimore City	Maryland	United States
Income	\$82,607	\$55,224	\$93,432	\$72,603

Source: ESRI 2023

Poverty

The table below shows the percentage of households living below the federal poverty level in Baltimore County, Baltimore City, Maryland and the United States.

Table A2.9: 2021 Percent of Households Below the Federal Poverty Level

	Baltimore County	Baltimore City	Maryland	United States
Percent Below FPL	9.1%	19.7%	9.1%	12.4%

Source: ESRI 2023

Food Stamps/SNAP

The table below shows the percentage of households receiving food stamps or SNAP in Baltimore County, Baltimore City, Maryland and the United States.

Table A2.10: 2021 Percent of Households Receiving Food Stamps/SNAP

	Baltimore County	Baltimore City	Maryland	United States
Households Receiving Food Stamps/SNAP	34,031	56,208	238,288	14,105,231
Total Households	333,180	248,855	2,363,944	124,010,992
Percentage of Households receiving Food Stamps/SNAP	10.2%	22.6%	10.1%	11.37%

Source: ESRI 2023

Educational Attainment

The table below shows the percentage of the population in Baltimore County, Baltimore City, Maryland and the United States broken out by educational attainment.

Table A2.11: 2023 Educational Attainment

	Baltimore County	Baltimore City	Maryland	United States
Less than 9 th Grade	2.6%	3.5%	3.2%	4.1%
Some High School/No Diploma	4.8%	8.8%	4.9%	5.5%
High School Diploma	22.1%	23.9%	21.4%	22.9%
GED/Alternative Credential	3.3%	5.2%	3.2%	4.1%
Some College/No Diploma	17.1%	16.9%	16.4%	17.7%
Associate's Degree	7.8%	6.5.7%	7.5%	9.5%
Bachelor's Degree	23.8%	18.4%	23.3%	22.3%
Graduate/ Professional Degree	18.4%	17.7%	20.2%	13.9%

Source: ESRI 2023

Unemployment

The table below shows the percentage of the population that is unemployed in Baltimore County, Baltimore City, Maryland and the United States and the United States broken out by age cohort.

Table A2.12: 2023 Unemployment				
	Baltimore County	Baltimore City	Maryland	United States
Percentage unemployed ages 16 to 24	1.3%	1.7%	1.2%	1.3%
Percentage unemployed ages 25 to 54	1.9%	2.8%	1.9%	2.2%
Percentage unemployed ages 55 to 64	0.6%	0.7%	0.5%	0.6%
Percentage unemployed ages 65 or more	0.3%	0.5%	0.2%	0.2%

Source: ESRI 2023

Uninsured Population

The table below shows the percentage of the population that is uninsured in Baltimore County, Baltimore City, Maryland and the United States and the United States broken out by age cohort.

Table A2.13: 2021 Uninsured Population				
	Baltimore County	Baltimore City	Maryland	United States
Percentage uninsured ages 18 or below	0.9%	0.8%	0.9%	1.3%
Percentage uninsured ages 19 to 34	1.9%	2.2%	2.1%	3.2%
Percentage uninsured ages 35 to 64	2.3%	2.9%	2.8%	4.2%
Percentage uninsured ages 65 or more	0.1%	0.1%	0.1%	0.1%

Source: ACS 2021

APPENDIX 3 | SECONDARY DATA METHODOLOGY AND SOURCES

Many individual secondary data measures were analyzed as part of the CHNA process. These data provide detailed insight into the health status and health-related behavior of residents in the county. These secondary data are based on statistics of actual occurrences, such as the incidence of certain diseases, as well as statistics related to SDoH.

Methodology

All individual secondary data measures were grouped into six categories and 20 corresponding focus areas based on “common themes.” In order to draw conclusions about the secondary data for Baltimore County, its performance on each data measure was compared to targets/benchmarks. If Baltimore County’s performance was more than five percent worse than the comparative benchmark, it was concluded that improvements could be needed to better the health of the community. Conversely, if an area performed more than five percent better than the benchmark, it was concluded that while a need is still present, the significance of that need relative to others is likely less acute. The most recently available data were compared to these targets/benchmarks in the following order (as applicable):

- For all available data sources, state and national averages were compared.
- Peer County for Comparison: For the purposes of this analysis, Baltimore City has been identified as a peer county for comparison, due to the two counties’ relatively similar population density and demographic makeup.

The following methodology was used to assign a priority level to each individual secondary data measure:

- If the data were more than 5 percent worse = High need
- If the data were within or equal to 5 percent (better or worse) = Medium need
- If the data were more than 5 percent better = Low need

These measures are noted with an asterisk.

Additionally, data measures were also viewed with regard to performance over time and whether the measure has improved or worsened compared to the prior CHNA timeframe.

Data Sources

The following tables are organized by each of the twenty focus areas and contain information related to the secondary data measures analyzed including a description of each measure, the data source, and most recent data time periods.

Table A3.1: Access to Care

Measure	Description	Data Source	Most Recent Data Year(s)
Uninsured (percent of population < 65 without health insurance)	Percentage of the population under age 65 without health insurance coverage.	ESRI Business Analyst. Data accessed September 2023.	2021
Primary Care (ratio of population to primary care physicians - population per one provider)	Ratio of the population to primary care physicians. Primary care physicians include practicing non-federal physicians (M.D.'s and D.O.'s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. The ratio represents the number of individuals served by one physician in a county, if the population was equally distributed across physicians. Prior to the 2013 County Health Rankings, primary care physicians were defined only as M.D.s. In 2013, D.O.s were incorporated into the definition of primary care physicians and obstetrics/gynecology was removed as a primary care physician type.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Dentists (ratio of population to dentists - population per one dentist)	Ratio of the population to dentists. The ratio represents the population served by one dentist if the entire population of a county was distributed equally across all practicing dentists.	ESRI Business Analyst. Data accessed September 2023.	2021
Other primary care providers (ratio of population to other primary care providers - population per one provider)	Ratio of the county population to the number of other primary care providers. Other primary care providers include nurse practitioners (NP), physician assistants (PA), and clinical nurse specialists. Please note that the methods for calculating this measure changed in the 2017 Rankings.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2022
Children receiving dental care (ages 0 to 20)	This indicator reflects the percentage of children (aged 0-20 years) enrolled in Medicaid (320+ days) who	Maryland Department of Health, State Health Improvement Process	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	received at least one dental visit during the past year.	(SHIP). Data accessed September 2023.	
ED visit rate due to addiction-related conditions	This indicator shows the rate of emergency department visits related to substance use disorders (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
ED visit rate due to asthma	This indicator shows the rate of emergency department visits due to asthma (per 10,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
ED visit rate due to diabetes	This indicator shows the emergency department visit rate due to diabetes (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
ED visit rate due to hypertension	This indicator shows the rate of emergency department visits due to hypertension (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
ED visit rate due to dental problems	This indicator shows the emergency department visit rate related to dental problems (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
Persons with a usual primary care provider	This indicator shows the percentage of people who reported that they had one person they think of as their personal doctor or healthcare provider.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2021
Uninsured ED visits	This indicator shows the percentage of persons without health (medical) insurance.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
Mental health providers (ratio of population to mental health providers - population per one provider)	Ratio of the population to mental health providers. Mental health providers are defined as psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and mental health providers that treat alcohol and other drug abuse, as well as advanced practice nurses specializing in mental healthcare.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2022

Measure	Description	Data Source	Most Recent Data Year(s)
	The ratio represents the number of individuals served by one mental health provider in a county, if the population were equally distributed across providers. In 2015, marriage and family therapists and mental health providers that treat alcohol and other drug abuse were added to this measure.		

Table A3.2: Built Environment

Measure	Description	Data Source	Most Recent Data Year(s)
Food environment index (index of factors that contribute to a healthy food environment, 0 (worst) to 10 (best))	<p>The Food Environment Index measures the quality of the food environment in a county on a scale from 0 to 10. The Food Environment Index is comprised of two variables: Limited access to healthy foods from the USDA’s Food Environment Atlas estimates the percentage of the population who are low income and do not live close to a grocery store. Living close to a grocery store is defined differently in rural and nonrural areas: in rural areas, it means living less than 10 miles from a grocery store whereas in nonrural areas, it means less than 1 mile. Low income is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size. Food insecurity from Feeding America estimates the percentage of the population who did not have access to a reliable source of food during the past year. The two variables are scaled from 0 to 10 (zero being the worst value in the nation, and 10 being the best) and averaged to produce the Food Environment Index. In 2016, the average value for counties was 7.0 and most counties fell between about 5.4 and 8.3.</p>	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2019 & 2020
Access to exercise opportunities (percent of	Percentage of individuals in a county who live reasonably close to a	Robert Wood Johnson Foundation & University	2022 & 2020

Measure	Description	Data Source	Most Recent Data Year(s)
<p>the population with adequate access to locations for physical activity)</p>	<p>location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Individuals are considered to have access to exercise opportunities if they: reside in a census block that is within a half mile of a park or reside in an urban census block that is within one mile of a recreational facility or reside in a rural census block that is within three miles of a recreational facility. The numerator is the number of individuals who live in census blocks meeting at least one of the above criteria. The denominator is the total county population. Locations for physical activity are defined as parks or recreational facilities. Parks include local, state, and national parks. Recreational facilities include YMCAs as well as businesses identified by the following Standard Industry Classification (SIC) codes and include a wide variety of facilities including gyms, community centers, dance studios and pools: 799101, 799102, 799103, 799106, 799107, 799108, 799109, 799110, 799111, 799112, 799201, 799701, 799702, 799703, 799704, 799707, 799711, 799717, 799723, 799901, 799908, 799958, 799969, 799971, 799984, or 799998. The way this measure is calculated has changed over time. In 2018, County Health Rankings switched from using North American Information Classification System (NAICS) codes to using Standard Industry Classification (SIC) codes due to lack of availability of a nationally reliable and updated data source.</p>	<p>of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.</p>	
<p>% Broadband Access</p>	<p>Percentage of households with broadband internet connection.</p>	<p>Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.</p>	<p>2017-2021</p>

Table A3.4: Diet and Exercise

Measure	Description	Data Source	Most Recent Data Year(s)
Physical inactivity (percent of adults that report no leisure time physical activity)	Percentage of adults ages 20 and over reporting no leisure-time physical activity in the past month. Examples of physical activities include running, calisthenics, golf, gardening, or walking for exercise. The method for calculating Physical Inactivity changed. Data for Physical Inactivity are provided by the CDC Interactive Diabetes Atlas which combines 3 years of survey data to provide county-level estimates. In 2011, BRFSS changed their methodology to include cell phone and landline participants. Previously only landlines were used to collect data. Physical Inactivity is created using statistical modeling.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Physical Activity (percentage)	This indicator shows the percentage of persons who reported at least 150 minutes of moderate physical activity or at least 75 minutes of vigorous physical activity per week.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2019

Table A3.5: Education

Measure	Description	Data Source	Most Recent Data Year(s)
Students entering kindergarten ready to learn	This indicator shows the percentage of students who enter Kindergarten ready to learn.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
School Segregation	The extent to which students within different race and ethnicity groups are unevenly distributed across schools when compared with the racial and ethnic composition of the local population. The index ranges from 0 to 1 with lower values representing a school composition that approximates race and ethnicity distributions in the student populations within the county, and higher values representing more segregation.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2021-2022

Measure	Description	Data Source	Most Recent Data Year(s)
School Funding Adequacy	The average gap in dollars between actual and required spending per pupil among public school districts. Required spending is an estimate of dollars needed to achieve U.S. average test scores in each district.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
% Less than 9 th Grade	Percentage of adults over age 25 who have less than a 9 th grade education.	ESRI Business Analyst. Data accessed September 2023.	2023
% Some High School	Percentage of adults over age 25 who attended some high school but did not earn their diploma or alternative credential.	ESRI Business Analyst. Data accessed September 2023.	2023
% High School Diploma	Percentage of adults over age 25 who earned a high school diploma.	ESRI Business Analyst. Data accessed September 2023.	2023
% GED/Alternative Credential	Percentage of adults over age 25 who earned a GED or an alternative credential.	ESRI Business Analyst. Data accessed September 2023.	2023
% Some College	Percentage of adults over age 25 who attended some college but did not earn their diploma.	ESRI Business Analyst. Data accessed September 2023.	2023
% Associate's Degree	Percentage of adults over age 25 who earned an Associate's degree.	ESRI Business Analyst. Data accessed September 2023.	2023
% Bachelor's Degree	Percentage of adults over age 25 who earned a four-year college Bachelor's degree.	ESRI Business Analyst. Data accessed September 2023.	2023
% Graduate/ Professional Degree	Percentage of adults over age 25 who earned a graduate or professional degree.	ESRI Business Analyst. Data accessed September 2023.	2023

Table A3.6: Employment

Measure	Description	Data Source	Most Recent Data Year(s)
Unemployment rate (percent of population age 16+ unemployed)	Percentage of a county's workforce that is not employed. The numerator is the number of individuals over age 16 in a county who are seeking work but do not have a job. The denominator is the total labor force, which includes all individuals over age 16 who are actively searching for work and unemployed plus those who are employed. Unemployment estimates are modeled.	ESRI Business Analyst. Data accessed September 2023.	2023

Table A3.7: Environmental Quality

Measure	Description	Data Source	Most Recent Data Year(s)
Air pollution (avg daily measure of fine particulate matter in micrograms per cubic meter)	<p>Average daily density of fine particulate matter in micrograms per cubic meter. Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers (PM2.5).</p> <p>Air Pollution is modeled. For 2017, County Health Rankings is using data provided by the EPHT Network. From 2013-2016 the County Health Rankings used data provided by the NASA Applied Sciences Program, which used a similar methodology but also incorporates satellite data. For 2012 and prior years of the County Health Rankings, data were obtained from the EPHT Network, but the measures of air quality differed from the current measure: County Health Rankings reported the average number of days annually that both PM2.5 and ozone pollution were reported to be over the accepted limit.</p>	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2019
Presence of Water Violation	Indicator of the presence of health-related drinking water violations. 'Yes' indicates the presence of a violation, 'No' indicates no violation.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2021
Days with Unhealthy Air Quality	Number of days where the daily 8-hour maximum concentration of ozone exceeded 71 parts per billion, the minimum value deemed by the Environmental Protection Agency as unhealthy for sensitive groups.	American Lung Association. Data accessed September 2023.	2019-2021
Days with Unhealthy Particle Pollution	Number of days where the daily 24-hour maximum concentration for particles with diameter less than 2.5 micrometers exceeded 33.5 micrograms per cubic meter, the minimum value deemed by the Environmental Protection Agency as unhealthy for sensitive groups.	American Lung Association. Data accessed September 2023.	2019-2021

Table A3.8: Family, Community, and Social Support

Measure	Description	Data Source	Most Recent Data Year(s)
Percentage of children that live in single-parent household	Percentage of children (less than 18 years of age) in family households that live in a household headed by a single parent. The single parent could be a male or female and is without the presence of a spouse. Foster children and children living in non-family households or group quarters are not included in either the numerator or denominator.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Social associations (number of membership associations per 10,000 population)	Number of organizations per 10,000 population in a county. The numerator is the number of organizations or associations in a county. Associations include membership organizations such as civic organizations, bowling centers, golf clubs, fitness centers, sports organizations, political organizations, labor organizations, business organizations, and professional organizations. The denominator is the population of a county. Social Associations does not measure all of the social support available within a county. Data and business codes are self-reported by businesses in a county. We use the primary business code of organizations, which in some cases may not match up with our notion of what should be labeled as a civic organization. This measure does not take into account other important social connections offered via family support structures, informal networks, or community service organizations, all of which are important to consider when understanding the amount of social support available within a county.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Disconnected youth	Percentage of teens and young adults ages 16-24 who are neither working nor in school.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021

Measure	Description	Data Source	Most Recent Data Year(s)
Residential segregation - black/white	Degree to which two or more groups live separately from one another in a geographic area. The index of dissimilarity is a demographic measure of the evenness with which two groups (black and white residents, in this case) are distributed across the component geographic areas (census tracts, in this case) that make up a larger area (counties, in this case). The index score can be interpreted as the percentage of either black or white residents that would have to move to different geographic areas in order to produce a distribution that matches that of the larger area.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Percentage not proficient in English	Percentage of population that is not proficient in English.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Childcare Cost Burden	Childcare costs for a household with two children as a percent of median household income.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2022 & 2021
Childcare Centers	Number of childcare centers per 1,000 population under 5 years old.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2010-2022
Diversity Index	Likelihood of two people chosen at random being from a different race/ethnicity.	ESRI Business Analyst. Data accessed September 2023.	2023

Table A3.9: Food Security

Measure	Description	Data Source	Most Recent Data Year(s)
Percentage of households experiencing food insecurity	Percentage of the population who did not have access to a reliable source of food during the past year.	Robert Wood Johnson Foundation & University of Wisconsin Population	2020

Measure	Description	Data Source	Most Recent Data Year(s)
	This measure was modeled using information from the Community Population Survey, Bureau of Labor Statistics, and American Community Survey. More detailed information can be found here. This is one of two measures that are used to construct the Food Environment Index.	Health Institute, County Health Rankings. Data accessed September 2023.	
Limited access to healthy foods	Percentage of population who are low-income and do not live close to a grocery store.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2019
Children eligible for free or reduced-price lunch	Percentage of children enrolled in public schools, grades PK - 12, eligible for free (family income less than 130 percent of federal poverty level) or reduced price (family income less than 185 percent of federal poverty level) lunch.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020-2021
Food Insecurity Among Middle School Students: All races/ethnicities	Percentage of students who, when asked, said they were worried that their food money would run out before they could buy more, and/or if the food their family bought did not last and they did not have money to get more.	The Maryland Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS). Data accessed September 2023.	2021-2022
Food Insecurity Among High School Students: All races/ethnicities	Percentage of students who, when asked, said they were worried that their food money would run out before they could buy more, and/or if the food their family bought did not last and they did not have money to get more.	The Maryland Youth Risk Behavior Survey/Youth Tobacco Survey (YRBS/YTS). Data accessed September 2023.	2021-2022

Table A3.10: Housing and Homelessness

Measure	Description	Data Source	Most Recent Data Year(s)
Severe housing problems (percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities)	Percentage of households with one or more of the following housing problems: Housing unit lacks complete kitchen facilities; Housing unit lacks complete plumbing facilities; Household is severely overcrowded; or Household is severely cost burdened.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2015-2019

Measure	Description	Data Source	Most Recent Data Year(s)
	Incomplete kitchen facilities is defined as a unit which lacks a sink with running water, a range or a refrigerator. Incomplete plumbing facilities is defined as lacking hot and cold piped water, a flush toilet, or a bathtub/shower. Severe overcrowding is defined as more than 1.5 persons per room. Severe cost burden is defined as monthly housing costs (including utilities) that exceed 50 percent of monthly income. The numerator is the number of households in a county with at least one of the above housing problems and the denominator is the number of total households in a county.		
Percentage of owner-occupied housing	Percentage of occupied housing units that are owned.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Percentage of people spending more than 50 percent of their income on rental housing	Number of renter-occupied housing units spending 50 or more percent of household income on rent as a percentage of total renter-occupied housing units.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Affordable Housing (percentage)	This indicator shows the percentage of housing units sold that are affordable on the median teacher's salary.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2016

Table A3.11: Income

Measure	Description	Data Source	Most Recent Data Year(s)
Children in poverty (percent of children under age 18 in poverty)	Percentage of children under age 18 living in poverty. Poverty status is defined by family size and income and is measured at the household level. If a household's income is lower than the poverty threshold for a household of their size, they are	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2021

Measure	Description	Data Source	Most Recent Data Year(s)
	considered to be in poverty. Poverty thresholds differ by household size and geography. For more information on how poverty thresholds are calculated please see the Census poverty page. Children in Poverty estimates are modeled.		
Median household income	Income where half of households in a county earn more and half of households earn less. Income, defined as “Total income”, is the sum of the amounts reported separately for: wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental Security Income (SSI); public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income. Receipts from the following sources are not included as income: capital gains; money received from the sale of property (unless the recipient was engaged in the business of selling such property); the value of income “in kind” from food stamps, public housing subsidies, medical care, employer contributions for individuals, etc.; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.	ESRI Business Analyst. Data accessed September 2023.	2023
Income inequality (ratio of household income at the 80th percentile to income at the 20th percentile)	Ratio of household income at the 80th percentile to that at the 20th percentile, i.e., when the incomes of all households in a county are listed from highest to lowest, the 80th percentile is the level of income at which only 20 percent of households have higher incomes, and the 20th percentile is the level of income at which only 20 percent of households	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021

Measure	Description	Data Source	Most Recent Data Year(s)
	have lower incomes. A higher inequality ratio indicates greater division between the top and bottom ends of the income spectrum.		
Percentage of individuals living in poverty	Number of people living below poverty level as percent of total population.	MedStar Franklin Square, FY21 Community Health Needs Assessment Advisory Taskforce Kickoff Meeting. Data accessed September 2023.	2017-2021
Household Income (\$, 000s) - All	Average annual household income in 2014-2015 for children (now in their mid-30s) who grew up in this area.	The Opportunity Atlas, developed in partnership by the U.S. Census Bureau, Harvard University, and Brown University. Data accessed September 2023.	2014-2015
% Asset Limited, Income Constrained, Employed Households	Percentage of households who are earning more than the Federal Poverty Level, but not enough to afford the basics where they live.	United for ALICE. Data accessed September 2023.	2021
Gender Pay Gap	Ratio of women's median earnings to men's median earnings for all full-time, year-round workers, presented as "cents on the dollar."	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021

Table A3.12: Length of Life

Measure	Description	Data Source	Most Recent Data Year(s)
Premature Death (years of potential life lost before age 75 per 100,000 population age-adjusted)	Number of events (i.e., deaths, births, etc.) in a given time period (three-year period) divided by the average number of people at risk during that period. Years of potential life lost measures mortality by giving more weight to deaths at earlier ages than deaths at later ages. Premature deaths are deaths before age 75. All of the years of potential life lost in a county during a three-year period are summed and divided by the total population of the county during that same time period-this	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2018-2020

Measure	Description	Data Source	Most Recent Data Year(s)
	value is then multiplied by 100,000 to calculate the years of potential life lost under age 75 per 100,000 people. These are age-adjusted.		
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000 population (age-adjusted).	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2018-2020
Life expectancy	Average number of additional years that someone at a given age would be expected to live if current mortality conditions remained constant throughout their lifetime. Based on life expectancy at birth. State data are a single year while county data are a three-year aggregate. Data were not reported in the County Health Book prior to 2013.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2018-2020
Child mortality	Number of deaths among children under age 18 per 100,000 population	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2020

Table A3.13: Maternal and Infant Health

Measure	Description	Data Source	Most Recent Data Year(s)
Low birthweight (percent of live births with birthweight < 2500 grams)	Percentage of live births where the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.). The numerator is the number of low birthweight infants born over a 7-year time span, while the denominator is the total number of births in a county during the same time.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2014-2020
Infant mortality	Number of all infant deaths (within 1 year), per 1,000 live births.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data	2014-2020

Measure	Description	Data Source	Most Recent Data Year(s)
		accessed September 2023.	

Table A3.14: Mental Health

Measure	Description	Data Source	Most Recent Data Year(s)
Poor mental health days (avg number in past 30 days age-adjusted)	<p>Average number of mentally unhealthy days reported in past 30 days. This measure is based on responses to the Behavioral Risk Factor Surveillance System (BRFSS) question: “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” The value reported in the County Health Rankings is the average number of days a county’s adult respondents report that their mental health was not good. Poor Mental Health Days is age-adjusted. Prior to the 2016 County Health Rankings, the CDC’s BRFSS provided the County Health Rankings with county-level estimates that were constructed from seven years of responses from participants who used a landline phone. However, even with multiple years of data, these did not provide reliable estimates for all counties, particularly those with smaller respondent samples. In 2016, the CDC began producing single-year estimates at the county level using a combination of BRFSS data and a multilevel modeling approach based on respondent answers and individual characteristics such as age, sex, and race/ethnicity, along with county-level poverty and county and state-level contextual effects. Poor Mental Health Days estimates are created using statistical modeling.</p>	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Frequent mental distress	Percentage of adults who reported ≥14 days in response to the question, "Now, thinking about your mental	Robert Wood Johnson Foundation & University of Wisconsin Population	2020

Measure	Description	Data Source	Most Recent Data Year(s)
	health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"	Health Institute, County Health Rankings. Data accessed September 2023.	
ED visit rate due to mental health conditions	This indicator shows the rate of emergency department visits related to mental health disorders (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
Suicide Rate	This indicator shows the suicide rate per 100,000 population.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2016-2020
Hospitalization rate due to Alzheimer's or other dementias	This indicator shows the rate of hospitalizations related to Alzheimer's or other dementias (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
% Visited Mental Health Provider	Percent of adults who saw a psychologist or psychiatrist in the past 12 months.	ESRI Business Analyst. Data accessed September 2023.	2023
% Used Prescription Antidepressant Medications	Percent of adults who were prescribed and used antidepressant medications in the last 12 months.	ESRI Business Analyst. Data accessed September 2023.	2023
% Used Prescription Antianxiety Medications	Percent of adults who were prescribed and used antianxiety medications in the last 12 months.	ESRI Business Analyst. Data accessed September 2023.	2023
% Depressive Disorder Diagnosis	Percent of adults reporting that a health professional has told them that they have a depressive disorder.	American Health Rankings. Data accessed September 2023.	2022

Table A3.15: Physical Health

Measure	Description	Data Source	Most Recent Data Year(s)
Poor or fair health (percent of adults reporting fair or poor health age-adjusted)	Percentage of adults in a county who consider themselves to be in poor or fair health. This measure is based on responses to the Behavioral Risk Factor Surveillance Survey (BRFSS) question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" The value reported in the County Health Rankings is the percentage of	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020

Measure	Description	Data Source	Most Recent Data Year(s)
	<p>respondents who rated their health “fair” or “poor.” Poor or Fair Health is age-adjusted. Prior to the 2016 County Health Rankings, the CDC’s BRFSS provided the County Health Rankings with county-level estimates that were constructed from seven years of responses from participants who used a landline phone. However, even with multiple years of data, these did not provide reliable estimates for all counties, particularly those with smaller respondent samples. In 2016, the CDC began producing single-year estimates at the county level using a combination of BRFSS data and a multilevel modeling approach based on respondent answers and individual characteristics such as age, sex, and race/ethnicity, along with county-level poverty and county and state-level contextual effects. Poor or Fair Health estimates are created using statistical modeling.</p>		
<p>Poor physical health days (avg number of unhealthy days in past 30 days, age-adjusted)</p>	<p>Average number of physically unhealthy days reported in past 30 days. This measure is based on responses to the Behavioral Risk Factor Surveillance System (BRFSS) question: “Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” The value reported in the County Health Rankings is the average number of days a county’s adult respondents report that their physical health was not good. Poor Physical Health Days is age-adjusted. Prior to the 2016 County Health Rankings, the CDC’s BRFSS provided the County Health Rankings with county-level estimates that were constructed from seven years of responses from participants who used a landline phone. However, even with multiple years of data,</p>	<p>Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.</p>	<p>2020</p>

Measure	Description	Data Source	Most Recent Data Year(s)
	<p>these did not provide reliable estimates for all counties, particularly those with smaller respondent samples. In 2016, the CDC began producing single-year estimates at the county level using a combination of BRFSS data and a multilevel modeling approach based on respondent answers and individual characteristics such as age, sex, and race/ethnicity, along with county-level poverty and county and state-level contextual effects. Poor Physical Health Days estimates are created using statistical modeling.</p>		
<p>Adult obesity (percent of adults that report a BMI ≥ 30)</p>	<p>Based on responses to the Behavioral Risk Factor Surveillance Survey (BRFSS) and is the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m². Participants are asked to self-report their height and weight. From these reported values, BMIs for the participants are calculated. The method for calculating Adult Obesity changed. Data for Adult Obesity are provided by the CDC Interactive Diabetes Atlas which combines 3 years of survey data to provide county-level estimates. In 2011, BRFSS changed their methodology to include cell phone and landline participants. Previously only landlines were used to collect data. Adult Obesity is created using statistical modeling.</p>	<p>Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.</p>	<p>2020</p>
<p>Frequent physical distress</p>	<p>Percentage of adults who reported ≥ 14 days in response to the question, "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"</p>	<p>Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.</p>	<p>2020</p>
<p>Diabetes prevalence</p>	<p>Prevalence of diagnosed diabetes in a given county. Respondents were considered to have diagnosed diabetes if they responded "yes" to the question, "Has a doctor ever told</p>	<p>Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data</p>	<p>2020</p>

Measure	Description	Data Source	Most Recent Data Year(s)
	you that you have diabetes?" Women who indicated that they only had diabetes during pregnancy were not considered to have diabetes.	accessed September 2023.	
Insufficient Sleep	Percentage of adults who report fewer than 7 hours of sleep on average.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Adolescents who are obese	This indicator shows the percentage of adolescent public high school students who are obese.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2016
Sudden unexpected infant death rate	This indicator shows the rate of sudden unexpected infant deaths (SUIDs) per 1,000 live births. Sudden unexpected infant deaths (SUIDs) include deaths from Sudden Infant Death Syndrome (SIDS), unknown cause, accidental suffocation and strangulation in bed.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2016-2020
Adults who are not overweight or obese (percentage)	This indicator shows the percentage of adults who are not overweight or obese.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2021
Cancer mortality rate	This indicator shows the age-adjusted mortality rate from cancer (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2018-2020
Age-Adjusted Mortality Rate from Heart Disease	This indicator shows the age-adjusted mortality rate from heart disease (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2018-2020
Age-adjusted Death Rate due to Diabetes (per 100,000 population)	Age-adjusted Death Rate due to Diabetes (per 100,000 population).	MD Vital Statistics Report. Data accessed September 2023.	2020
Age-adjusted Death Rate due to Stroke (per 100,000 population)	Age-adjusted Death Rate due to Stroke (per 100,000 population).	MD Vital Statistics Report. Data accessed September 2023.	2020

Table A3.16: Quality of Care

Measure	Description	Data Source	Most Recent Data Year(s)
Preventable hospital stays (rate for ambulatory sensitive conditions per 1,000 Medicare enrollees)	Hospital discharge rate for ambulatory care-sensitive conditions per 1,000 fee-for-service Medicare enrollees. That means it looks at people who were discharged from the hospital for conditions that, with appropriate care, can normally be treated without the need for a hospital stay. Examples of these conditions include convulsions, chronic obstructive pulmonary disease, bacterial pneumonia, asthma, congestive heart failure, hypertension, angina, cellulitis, diabetes, gastroenteritis, kidney/urinary infection, and dehydration. Preventable hospital stays are measured among fee-for-service Medicare enrollees and is age-adjusted.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Mammography screening (percent of female Medicare enrollees)	Percentage of female Medicare enrollees ages 67-69 that received at least one mammogram during the last two years. The numerator is women ages 67-69 on Medicare who have received at least one mammogram during the past year. The denominator is all women ages 67-69 on Medicare in a specific geography.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Children and adults who are vaccinated annually against seasonal influenza	Percentage of fee-for-service (FFS) Medicare enrollees that had an annual flu vaccination.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Children receiving blood lead screening	This indicator reflects the percentage of children (aged 12-35 months) enrolled in Medicaid (90+ days) screened for lead in their blood.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2021
Children with elevated blood lead levels	Number of children (0-72 months old) with blood lead levels > 10 µg/dL divided by the Total Number of Children (0-72 months old) tested.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2020

Measure	Description	Data Source	Most Recent Data Year(s)
Early prenatal care	This indicator shows the percentage of pregnant women who receive prenatal care beginning in the first trimester.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2020

Table A3.17: Safety

Measure	Description	Data Source	Most Recent Data Year(s)
Injury mortality per 100,000 population	Number of deaths from planned (e.g., homicide or suicide) and unplanned (e.g., motor vehicle deaths) injuries per 100,000 population. This measure includes injuries from all causes and intents over a 5-year period. Deaths are counted in the county of residence for the person who died, rather than the county where the death occurred.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2016-2020
Motor vehicle crash deaths	Number of deaths due to traffic accidents involving a motor vehicle per 100,000 population. Motor vehicle crash deaths include traffic accidents involving motorcycles; 3-wheel motor vehicles; cars; vans; trucks; buses; street cars; ATVs; industrial, agricultural, and construction vehicles; and bicyclists or pedestrians when colliding with any of the previously listed motor vehicles. Deaths due to boating accidents and airline crashes are not included in this measure. In prior years, non-traffic motor vehicle accidents were included in this definition. ICD10 codes included are V02-V04 (.1, .9), V09.2, V12-V14 (.3-.9), V19 (.4-.6), V20-V28 (.3-.9), V29-V79 (.4-.9), V80 (.3-.5), V81.1, V82.1, V83-V86 (.0-.3), V87 (.0-.8), and V89.2.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2014-2020
Homicides	Number of deaths from assaults, defined as ICD-10 codes X85-Y09, per 100,000 population	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data	2016-2020

Measure	Description	Data Source	Most Recent Data Year(s)
		accessed September 2023.	
Firearm fatalities	Number of deaths due to firearms, defined as ICD-10 codes W32-W34, X72-X74, X93-X95, Y22-Y24, and Y35.0, per 100,000 population.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2019
Juvenile arrests	Rate of delinquency cases per 1,000 juveniles.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2022
Child maltreatment rate	This indicator shows the rate of children who are maltreated per 1,000 population under the age of 18.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2018-2020
Fall-related death rate	This indicator shows the rate of fall-related deaths per 100,000 population.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2017
Pedestrian injury rate on public roads	This indicator shows the rate of pedestrian injuries on public roads per 100,000 population.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2020
Domestic Violence	Number of domestic violence crimes divided by total population.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2020

Table A3.18 Sexual Health

Measure	Description	Data Source	Most Recent Data Year(s)
Sexually transmitted infections (chlamydia rate per 100,000)	Number of newly diagnosed chlamydia cases per 100,000 population	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020

Measure	Description	Data Source	Most Recent Data Year(s)
Teen birth rate (per 1,000 females ages 15-19)	Number of births to females ages 15-19 per 1,000 females	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2014-2020
HIV prevalence	Number of diagnosed cases of HIV for persons aged 13 years and older in a county per 100,000 population.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
HIV incidence rate	This indicator shows the rate of adult/adolescent cases (age 13+) diagnosed with HIV (per 100,000 population).	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2021

Table A3.19: Substance Use Disorders

Measure	Description	Data Source	Most Recent Data Year(s)
Excessive drinking	Percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average. Please note that the methods for calculating this measure changed in the 2011 Rankings and again in the 2016 Rankings. Excessive Drinking estimates are created using statistical modeling.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Alcohol-impaired driving deaths	Percentage of motor vehicle crash deaths which had alcohol involvement. The National Highway Traffic Safety Administration defines a fatal crash as alcohol-related or alcohol-involved if either a driver or a non-motorist (usually a pedestrian or bicyclist) had a measurable or estimated blood alcohol concentration of 0.01 grams per deciliter or above. Alcohol-Impaired	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2016-2020

Measure	Description	Data Source	Most Recent Data Year(s)
	Driving Deaths are measured in the county of occurrence.		
Drug overdose deaths	Number of deaths due to drug poisoning per 100,000 population. ICD-10 codes used include X40-X44, X60-X64, X85, and Y10-Y14. These codes cover accidental, intentional, and undetermined poisoning by and exposure to: 1) nonopioid analgesics, antipyretics and antirheumatics, 2) antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, 3) narcotics and psychodysleptics [hallucinogens], not elsewhere classified, 4) other drugs acting on the autonomic nervous system, and 5) other and unspecified drugs, medicaments and biological substances.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2018-2020
Opioid prescriptions dispensed (per 100 persons)	Opioid prescriptions dispensed (per 100 persons).	Center for Disease Control and Prevention. Data accessed September 2023.	2020

Table A3.20: Tobacco Use

Measure	Description	Data Source	Most Recent Data Year(s)
Adult smoking	Percentage of the adult population that currently smokes every day or most days and has smoked at least 100 cigarettes in their lifetime. Please note that the methods for calculating this measure changed in the 2016 Rankings. Adult Smoking estimates are created using statistical modeling.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2020
Adolescents who use tobacco products	This indicator shows the percentage of adolescents (public high school students) who used any tobacco product in the last 30 days.	Maryland Department of Health, State Health Improvement Process (SHIP). Data accessed September 2023.	2016

Table A3.21: Transportation Options and Transit

Measure	Description	Data Source	Most Recent Data Year(s)
Driving alone to work (percent of the workforce that drives alone to work)	Percentage of the workforce that usually drives alone to work. The numerator is the number of workers who commute alone to work via a car, truck, or van. The denominator is the total workforce.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Long commute/driving alone (among workers who commute in their car alone, the percentage that commute more than 30 minutes)	Percentage of workers who drive alone (via car, truck, or van) with a commute longer than 30 minutes. The numerator is the number of workers who drive alone for more than 30 minutes during their commute. The denominator is the number of workers who drive alone during their commute.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2017-2021
Traffic volume	Average traffic volume per meter of major roadways in the county.	Robert Wood Johnson Foundation & University of Wisconsin Population Health Institute, County Health Rankings. Data accessed September 2023.	2019
% Car Ownership	Percent of households that own at least one insured car.	ESRI Business Analyst. Data accessed September 2023.	2023
Household Intracity Mass Transit Spending	Average household spending on fares for mass transit trips within the county.	ESRI Business Analyst. Data accessed September 2023.	2023

APPENDIX 4 | SECONDARY DATA COMPARISONS

Description of Focus Area Comparisons

When viewing the secondary data summary tables, please note that the following color shadings have been included to identify how Baltimore County compares to Maryland and the national benchmark. If both statewide Maryland and national data was available, Maryland data was preferentially used as the target/benchmark value.

Secondary Data Summary Table Color Comparisons

Color Shading	Priority Level	Baltimore County Description
Green	Low	Represents measures in which Baltimore County scores are more than five percent better than the most applicable target/benchmark and for which a low priority level was assigned.
Yellow	Medium	Represents measures in which Baltimore County scores are comparable to the most applicable target/benchmark scoring within or equal to five percent , and for which a medium priority level was assigned.
Red	High	Represents measures in which Baltimore County scores are more than five percent worse than the most applicable target/benchmark and for which a high priority level was assigned.

Note: Please see the methodology section of this report for more information on assigning need levels to the secondary data.

Please note that to categorize each metric in this manner and identify the priority level, the Baltimore County value was compared to the benchmark by calculating the percentage difference between the values, relative to the benchmark value:

$$(Baltimore\ Co\ Value - Benchmark\ Value) / (Benchmark) \times 100 = \% \text{ Difference Used to Identify Priority Level}$$

For example, for the % Limited Access to Healthy Foods metric, the following calculation was completed:

$$(4.4 - 3.6) / (3.6) \times 100\% = 22.2\% = \text{Displayed as High Priority Level, Shaded in Red}$$

This metric indicates that the percentage of the population with limited access to healthy foods in Baltimore County is 22 percent worse (or, in this case, higher) than the percentage of the population with limited access to healthy foods in the state of Maryland.

Detailed Focus Area Benchmarks

Table A4.1: Access to Care

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Uninsured	10.0%	6.7%	6.5%	2021	Medium
Primary Care Physicians Ratio	1,310:1	1,133:1	1,098:1	2020	Medium
Dentist Ratio	1,380:1	1,258:1	1,299:1	2021	Medium
Other Primary Care Provider Ratio	810:1	775:1	772:1	2022	Medium
Children receiving dental care	N/A	56.3	55.0	2021	Medium
ED visits due to addiction-related conditions	N/A	2,017	1,689	2017	Low
ED visits due to asthma	N/A	68.4	68.0	2017	Medium
ED visits due to diabetes	N/A	243.7	224.6	2017	Low
ED visits due to hypertension	N/A	351.2	340.7	2017	Medium
ED visits due to dental care	N/A	362.7	281.1	2017	Low
Persons with usual primary care provider	N/A	87.3%	88.6%	2021	Medium
Uninsured ED visits	N/A	8.6	7.9	2017	Low

Table A4.2: Built Environment

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Food Environment Index	7.0	8.7	8.3	2019/2020	Low
% with Access to Exercise Opportunities	84.0%	92.0%	97.2%	2020/2022	Medium
Broadband Access	87.0%	90.0%	89.0%	2017-2021	Medium

Table A4.3: Diet and Exercise

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Physically Inactive	22.0%	20.6%	25.0%	2020	High

Table A4.4: Education

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Students entering kindergarten ready to learn	N/A	45.0%	47.0%	2017	Medium
School segregation	0.25	0.26	0.18	2021-2022	Low
School funding adequacy	1,062	724	-260	2020	High

Table A4.5: Employment

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Unemployed	5.4%	3.8%	4.1%	2023	High

Table A4.6: Environmental Quality

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Average Daily PM2.5	7.4	7.4	8.3	2019	High

Table A4.7: Family, Community and Social Support

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Children in Single-Parent Households	25.0%	26.2%	29.1%	2017-2021	High
Social Association Rate	9.1	8.9	8.1	2020	High
% Disconnected Youth	7.0%	6.0%	6.1%	2017-2021	Medium
Segregation Index – Black/White	63.0	63.5	59.7	2017-2021	Low
% Not Proficient in English	14.0%	3.0%	2.0%	2017-2021	Low

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Diversity Index	72.1	74.3	68.4	2023	High
Childcare Cost Burden	27.0%	22.0%	22.0%	2021/2022	Low
Childcare Centers	7.0	6.0	5.0	2010-2022	High

Table A4.8: Food Security

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Food Insecure	12.0%	9.0%	10.3%	2020	High
% Limited Access to Health Foods	6.0%	3.6%	4.4%	2019	High
% Eligible for Free or Reduced Lunch	53.0%	45.0%	52.0%	2020-2021	High
% Households with Children Receiving Public Assistance	24.4%	21.2%	23.3%	2020	High
Food Insecurity: Middle Schoolers	N/A	27.5%	31.6%	2021-2022	High
Food Insecurity: Middle Schoolers	N/A	27.5%	30.9%	2021-2022	High

Table A4.9: Housing and Homelessness

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Severe Housing Problems	17.0%	15.7%	15.3%	2015-2019	Medium
% Homeowners	65.0%	67.3%	66.5%	2017-2021	Medium
% Severe Housing Cost Burden	14.0%	14.0%	14.0%	2017-2021	Medium
% Affordable Housing	N/A	48.1%	64.1%	2016	Low

Table A4.10: Income

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Children in Poverty	17.0%	14.0%	14.2%	2021	Medium
Median Household Income	\$69,700	\$93,432	\$82,607	2023	High
Income Inequality	4.9	4.5	4.3	2017-2021	Medium
% Living in Poverty	12.8%	10.3%	9.8%	2017-2021	Medium
ALICE Households	28%	29%	34%	2021	High
Gender Pay Gap	0.81	0.87	0.85	2017-2021	Medium

Table A4.11: Length of Life

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Years of Potential Life Lost Rate	7,300	7,547	8,370.7	2018-2020	High
Premature Age-Adjusted Mortality	360	360	390	2018-2020	High
Life Expectancy	78.5	78.6	77.5	2018-2020	Medium
Child Mortality Rate	50.0	48.5	54.3	2017-2020	High

Table A4.12: Maternal and Infant Health

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Low Birthweight	8.0%	8.7%	9.1%	2014-2020	Medium
Infant Mortality Rate	6.0	6.3	6.5	2014-2020	Medium

Table A4.13: Mental Health

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Mental Health Provider Ratio	340:1	315:1	262:1	2022	Low
Average No. of Mentally Unhealthy Days	4.4	4.1	4.5	2020	High
% Frequent Mental Distress	14.0%	12.7%	14.5%	2020	High

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
ED visits due to mental health conditions	N/A	4,291.5	4,210.1	2017	Medium
Hospitalization rate due to Alzheimer's or other dementias	N/A	515.5	559.0	2017	High
% Visited Mental Health Provider	N/A	4.7%	4.9%	2023	High
% Used Prescription Antidepressant Medications	N/A	6.7%	7.0%	2023	High
% Used Prescription Antianxiety Medications	N/A	7.6%	7.9%	2023	Medium
Depression rate	20.5%	16.6%	20.7%	2022	High
Suicide death rate	14.0	10.0	11.0	2016-2020	High

Table A4.14: Physical Health

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Adults with Obesity	32.0%	30.9%	31.7%	2020	Medium
% Adults with Diabetes	9.0%	9.1%	8.8%	2020	Medium
% Frequent Physical Distress	9.0%	6.8%	7.7%	2020	High
% Insufficient Sleep	33.0%	34.1%	34.2%	2020	Medium
% Fair or Poor Health	12.0%	10.6%	12.0%	2020	High
Avg. No. of Physically Unhealthy Days	3.0	2.5	2.5	2020	Medium
Adolescents who are obese	N/A	15.9	14.7	2016	Low
Adults who are not overweight or obese (%)	N/A	33.4	34.1	2021	Medium
Age-Adjusted Death Rate	N/A	163.3	180.9	2018-2020	High

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
from Heart Disease					
Cancer Mortality Rate	N/A	145.5	158.3	2018-2020	High
Sudden unexpected infant death rate	N/A	0.8	0.7	2016-2020	Low
Age-adjusted Death Rate due to Stroke	38.8	42.5	47.1	2020	High

Table A4.15: Quality of Care

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Children/adults vaccinated annually against seasonal influenza	51.0%	55.0%	59.0%	2020	Low
Mammography screening	37.0%	37.0%	41.0%	2020	Low
Preventable hospital stays	28.1	26.5	30.1	2020	High
Children receiving blood lead screening	N/A	67.1	69.8	2021	Medium
Children with elevated blood lead levels	N/A	0.2	0.6	2020	High
Early prenatal care	N/A	70.2%	71.8%	2020	Medium

Table A4.16: Safety

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Firearm fatalities	12.0	12.3	12.9	2019	High
Homicides	6.0	9.1	8.8	2016-2020	Medium
Injury mortality	76.0	88.3	109.4	2016-2020	High
Juvenile arrests	24.0	27.1	38.9	2022	High
Motor vehicle crash deaths	12.0	8.9	8.3	2014-2020	Low
Child maltreatment rate	N/A	4.6	3.7	2018-2020	Low

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Domestic Violence	N/A	568.6	1079.0	2020	High
Fall-related death rate	N/A	10.6	15.5	2017	High
Pedestrian injury rate on public roads	N/A	53.5	54.4	2020	Medium

Table A4.17: Sexual Health

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Teen Birth Rate	19.0	15.2	13.2	2014-2020	Low
HIV Prevalence Rate	380.0	655.4	466.8	2020	Low
HIV Incidence Rate	N/A	15.0	14.8	2021	Medium
Chlamydia Rate	481.3	535.9	533.1	2020	Medium

Table A4.18: Substance Use Disorders

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Drug Overdose Mortality Rate	23.0	41.1	50.8	2018-2020	High
% Excessive Drinking	19.0%	14.6%	16.9%	2020	High
% Driving Deaths with Alcohol	27.0%	28.3%	26.8%	2016-2020	Low
Opioid prescriptions dispensed	43.3	39.5	41.7	2020	High

Table A4.19: Tobacco Use

Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
% Smokers	16.0%	11.1%	13.8%	2020	High
Adolescents who use tobacco products	N/A	14.4%	16.5%	2016	High

Table A4.20: Transportation Options and Transit

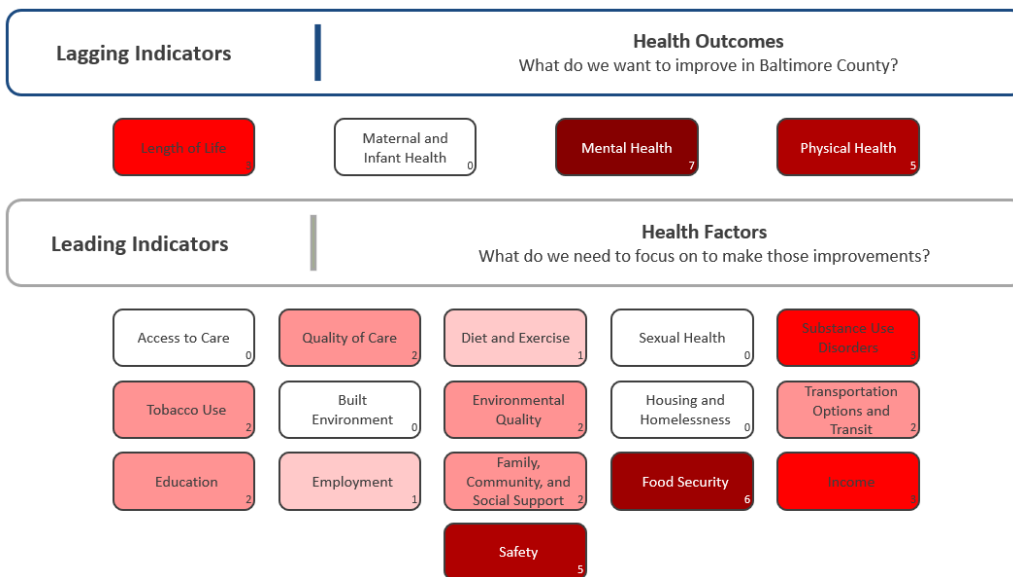
Measure	National Benchmark	Maryland Benchmark	Baltimore County Data	Most Recent Data Year	Baltimore County Need
Traffic Volume	505.0	695.2	835.4	2019	High
% Drive Alone to Work	73.0%	69.8%	75.1%	2017-2021	High
% Long Commute – Drives Alone	37.0%	49.6%	45.1%	2017-2021	Low
% Car Ownership	N/A	89.8%	90.7%	2023	Medium
Mass Transit Spending	N/A	102.6	88.2	2023	Low

APPENDIX 5 | SECONDARY DATA SUMMARY

The table and graphic below include summaries of potential priority need areas, as identified by the secondary data analysis process, as well as priority areas of need identified by other state, local, and national sources.

Priority Area	Secondary Data Findings	MedStar Health 2021	Kennedy Krieger 2022	Sheppard Pratt 2022	Baltimore County 2020	Alive! Maryland 2022	Healthy People 2030
Social Determinants of Health*	✓	✓	✓	✓	✓	✓	✓
Access to Health Care	✓	✓	✓	✓	✓	✓	✓
Mental Health and Behavioral Health/ Wellness	✓	✓	✓	✓	✓	✓	
Health Equity	✓	✓	✓		✓	✓	✓
Health Literacy and Communication		✓	✓	✓		✓	✓
Transportation	✓	✓	✓	✓	✓		
Substance Abuse	✓	✓		✓	✓		
Chronic Disease (Physical Health)	✓	✓			✓		
Specialty Care		✓	✓			✓	
Staffing Support			✓	✓		✓	
Childhood Support	✓		✓				
Obesity/Diabetes/Fitness/Nutrition		✓			✓		
Primary Care		✓				✓	
Sexual Health						✓	

* Data indicate needs particularly in areas related to safety, food security, and income.



Values in bottom right represent number of measures with high need.

*Access to care metrics are based on the ratio of county population to providers, which does not account for the significant in-migration that occurs into Baltimore County facilities for healthcare.

APPENDIX 6 | DETAILED PRIMARY DATA FINDINGS

Primary data were collected through web-based Key Leader and Community surveys, and focus groups, which were conducted in-person or in a virtual format.

Methodologies

The methodologies varied based on the type of primary data being analyzed. The following section describes the various methodologies used to analyze the primary data, along with key findings.

Focus Groups

The following 13 focus groups were conducted virtually or in person between October 3, 2023 and November 3, 2023. These groups included representation from key leaders, non-profit partners, patients, and community members, with over 90 participants providing responses.

- Pikesville Senior Center
- Behavioral Health Advisory Council
- Housing Community of Development/Catholic Charities
- GBMC Veteran patients
- Cherry Hill seniors
- Concord Baptist Church
- Jewish Community Center of Greater Baltimore
- Northwest Hospital Diabetes Center
- Eastern Family Resource Center
- Rosedale Senior Center
- Immaculate Heart of Mary Parkville
- Towson & Parkville YMCA
- Prevent T2 (Diabetes prevention group)

Input was gathered on the following topics:

- Community health concerns
- Access to care
- Social and environmental concerns that may impact health

Key findings from the focus groups are summarized by topic in the graphic below.



Healthcare: Access

- Primary concerns included affordability of health insurance and issues understanding coverage
- Participants described some areas as “healthcare deserts” and expressed frustration at lack of providers in some neighborhoods



Healthcare: Quality

- Participants expressed fear and mistrust toward health providers, and many described feeling like they were not being heard when accessing care



Food Security

- The cost and general availability of healthy food options was described as a significant challenge
- Many neighborhoods are food deserts and lack grocery stores



Education

- Educational needs primarily focused on community health education and building awareness of existing resources



Transportation & Transit

- Lack of access to transportation and transit was described as a major barrier to healthcare – particularly for older adults and the County’s rural communities



Family, Community and Social Support

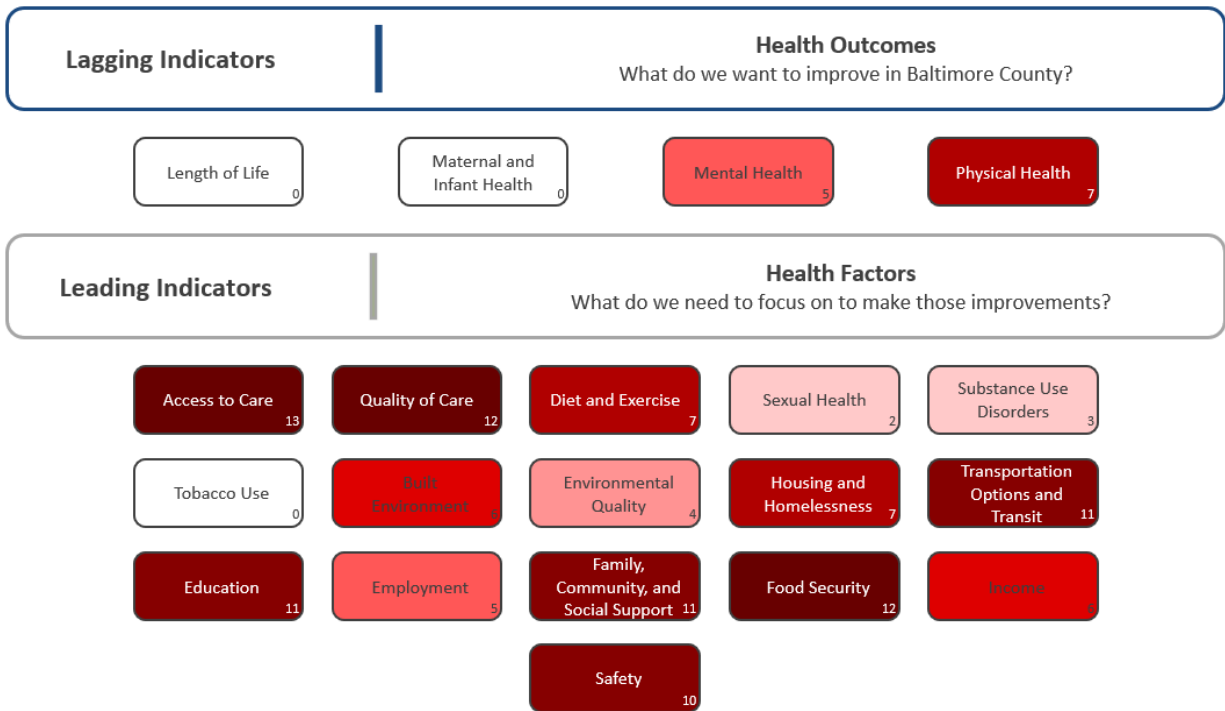
- Many participants expressed a need for greater community engagement to improve overall well-being
- Community associations were described as positive assets to the community that are severely underutilized



Safety

- Crime and violence were frequently noted as major concerns
- A lack of safe spaces to exercise outdoors contributes to poor health in the community

Focus Group Findings by Category



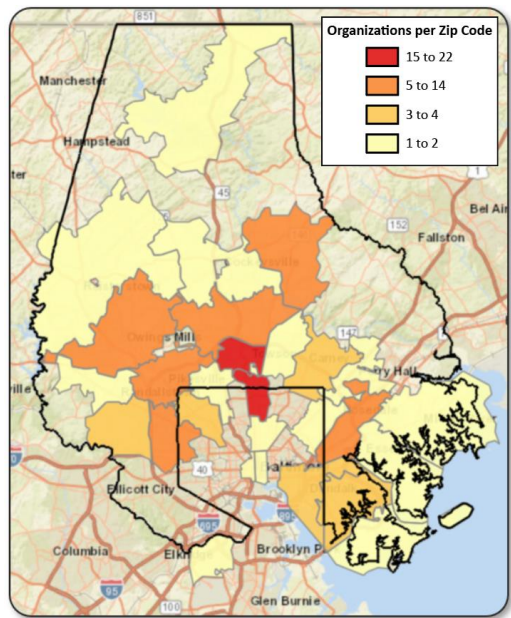
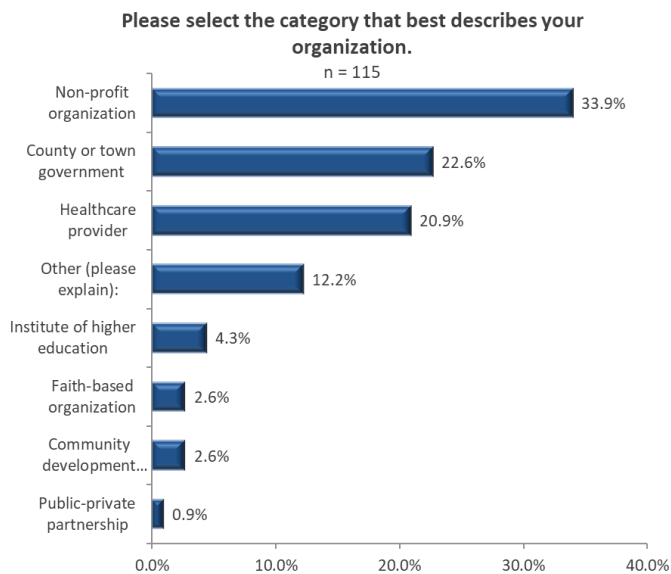
Key Leader Web Survey

A total of 115 key leaders completed the web-based Key Leader Survey, which was live from September 5, 2023 to November 3, 2023.

Key leaders represented a variety of organizations with geographies throughout Baltimore County. Broad categories included:

- Nonprofit partners
- Government officials
- Healthcare providers
- Academic partners
- First responders
- Business leaders

The chart below shows the distribution of Key Leader survey respondents by type of organization. The map below shows the geographic distribution of Key Leader survey respondents based on the ZIP code in which the organization they represent is located.



In general, survey questions focused on the following topics:

- Top community health needs of Baltimore County
- Top social drivers that impact health
- Availability of community resources
- Access to care (barriers to care and locations of care)
- Health literacy

The key findings from the Key Leader Survey are detailed below:

- Key leaders identified the top 3 health needs of Baltimore County as: mental health/suicide, substance/alcohol use and housing.
- Key leaders identified the following areas as having the most impact on health in the community: access to affordable housing, crime and violence, and access to healthy foods.
- Key leaders identified cost of care, health literacy, and appointment availability as the most significant barriers to care.
- Residents in poverty were identified as the community group in Baltimore County most in need of assistance.
- The most common suggestions for improving community health focused on increasing affordable housing, community engagement, affordable healthcare, transportation, and adding more recreational facilities and neighborhood/mobile clinics.

Charts detailing key findings from the Key Leader Survey are displayed below:

Figure A6.1
How do you believe the health of the community you serve has changed over the past three years?
n= 115

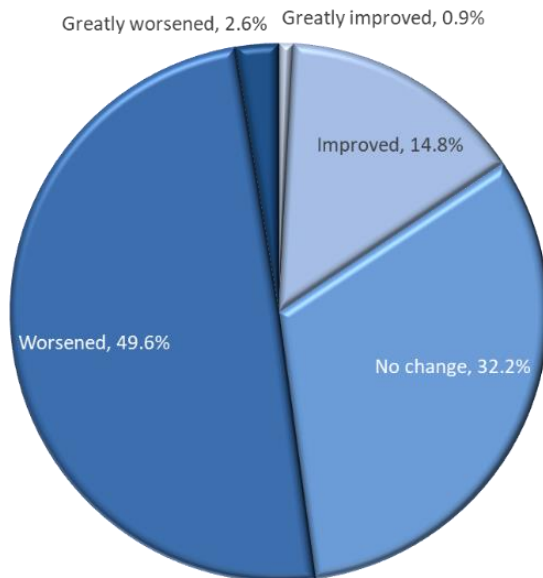


Figure A6.2

Please select the top FIVE (5) community health needs of the Baltimore County.
n= 115

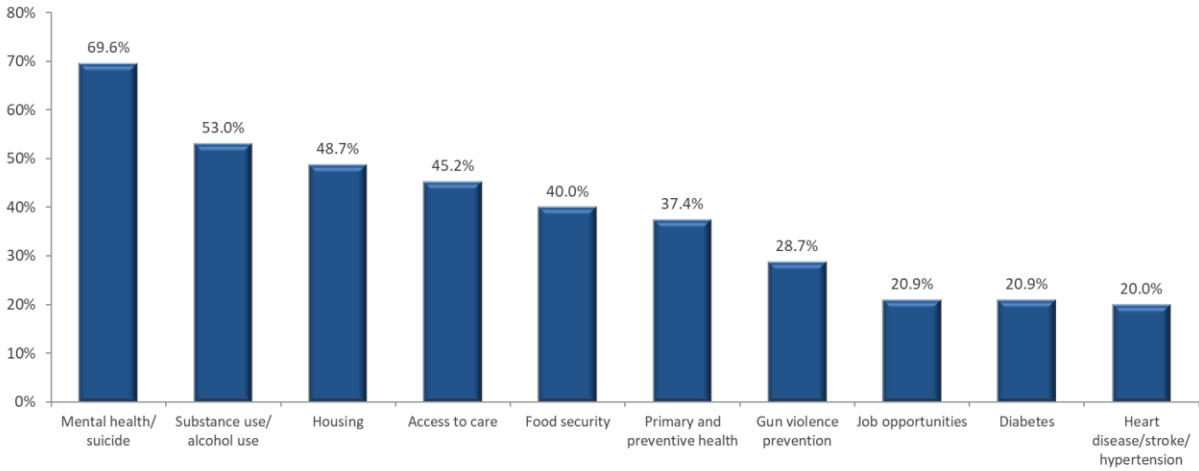


Figure A6.3

Please choose the top 5 social needs in the community you serve.
n= 115

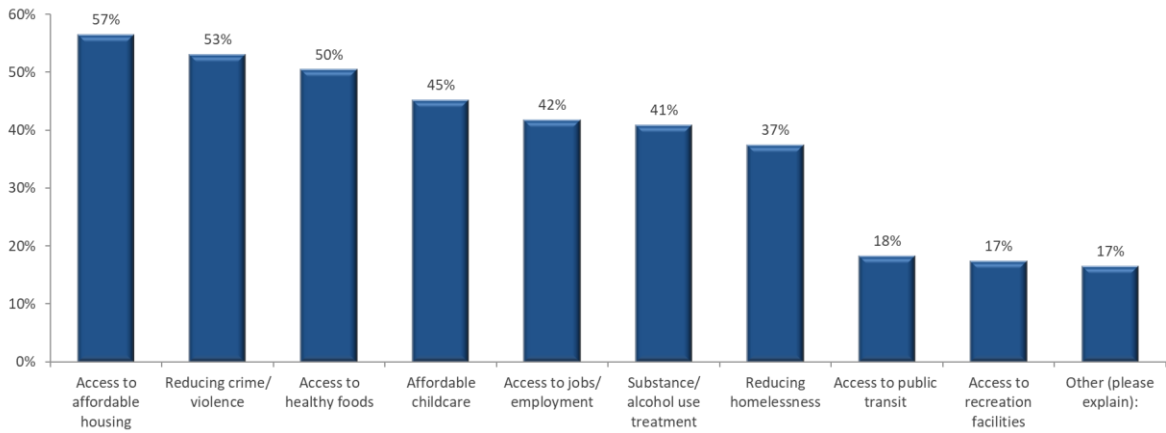


Figure A6.4

Choose the group(s) that needs more help in the community you serve. Choose all that apply.
n = 115

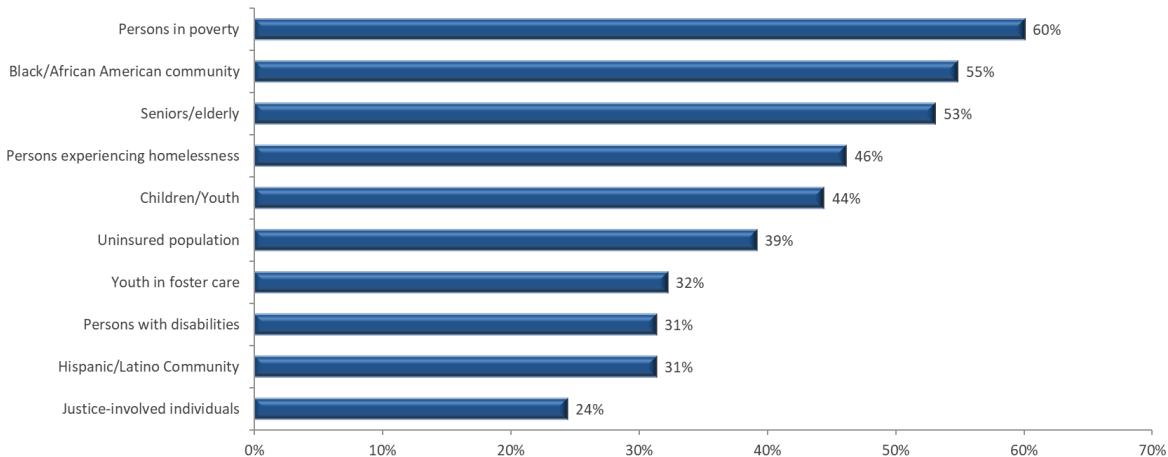


Figure A6.5

On a scale of 1 to 5, please rate the following statements for the community in which you live?
n = 115

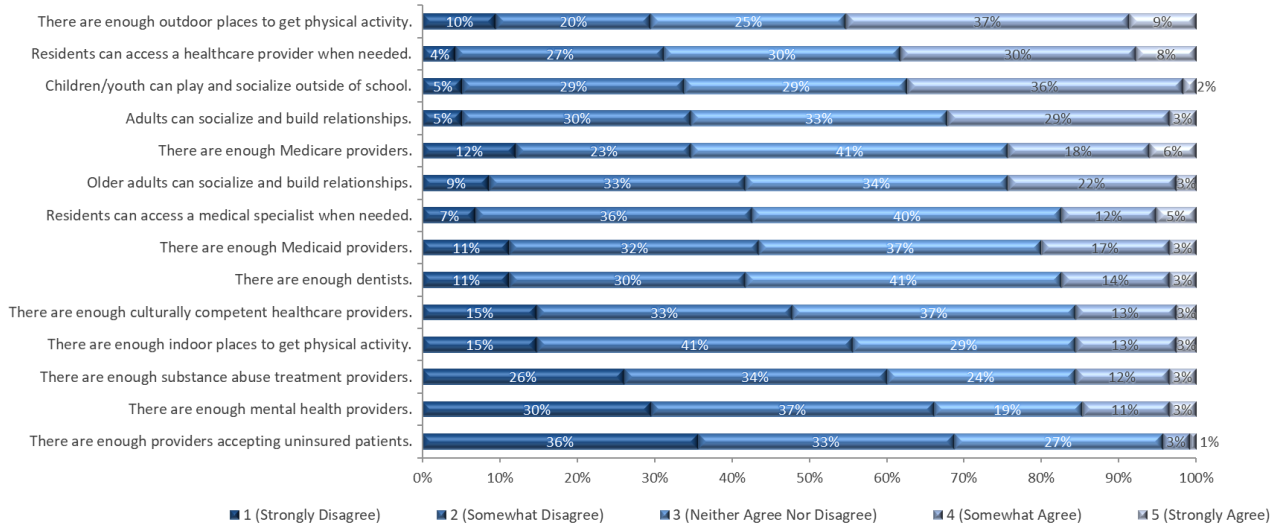


Figure A6.6

Do you believe that health and social needs are uniform across Baltimore County? n = 115

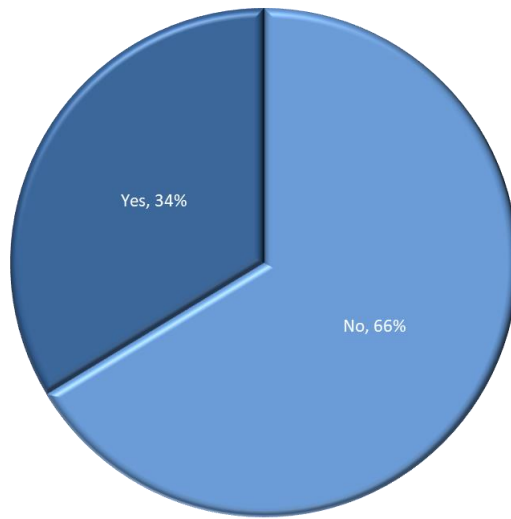


Figure A6.7

What barriers, if any, exist to improving the health of residents in your community? Choose all that apply. n = 115

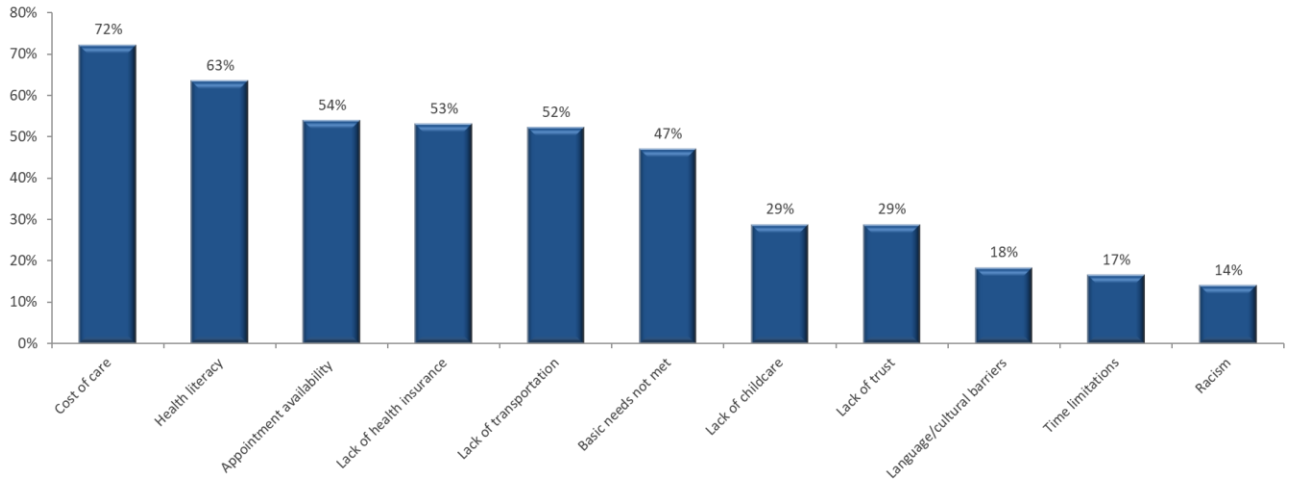


Figure A6.8

Do you feel that the residents of the community you serve are health literate? n = 115

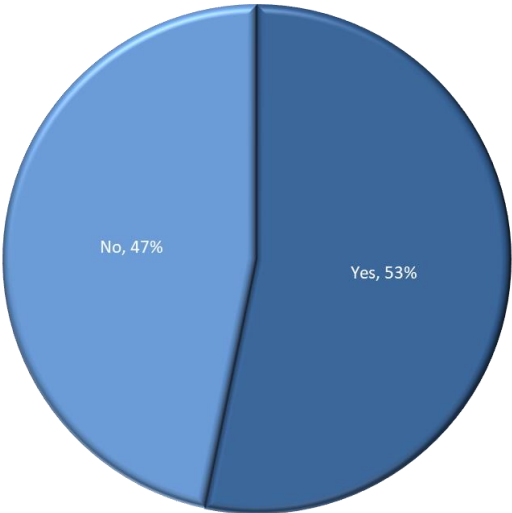
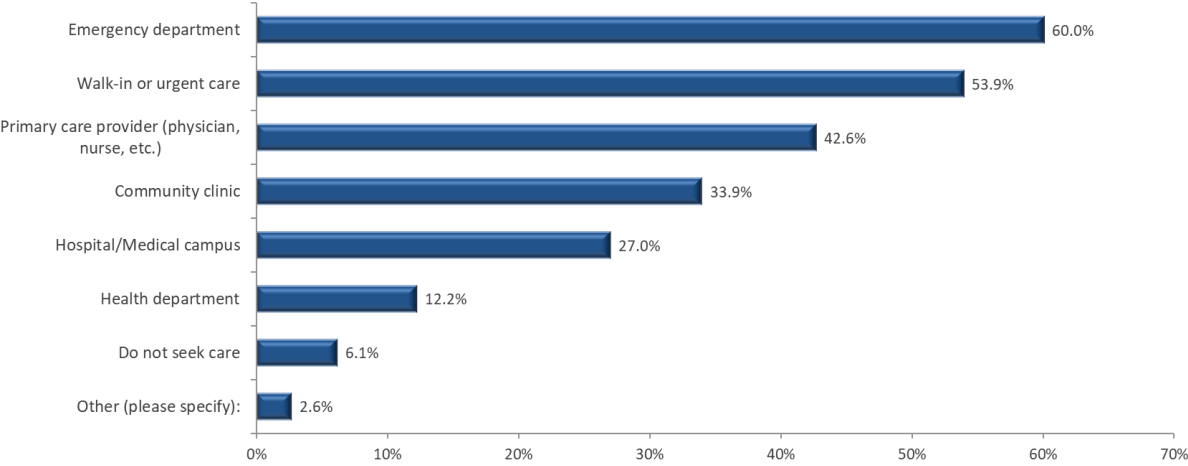


Figure A6.9

Members of your community typically seek medical care through... Please select all that apply n= 115



The questions administered via the Key Leader Survey instrument are below:

Baltimore County | 2024 Key Community Health Leader Survey

1. Please select the category that best describes your organization.

- a. Faith-based organization
- b. Non-profit organization
- c. Media
- d. County or town government
- e. Institute of higher education
- f. Healthcare provider
- g. Public – private partnership
- h. Community Development Corporation
- i. Other (please explain) _____

2. What is the ZIP code of your organization/facility? Please write 5-digit ZIP code.

3. How do you believe the health of the community you serve has changed over the past three years?

- a. Greatly improved
- b. Improved
- c. No change
- d. Worsened
- e. Greatly worsened

- [if “Greatly improved” or “Improved”] In what way(s) has the health of the community you serve improved?
- [if “Greatly worsened” or “Worsened”] In what way(s) has the health of the community you serve worsened?

4. From the list provided, please rank the top FIVE (5) community health needs of Baltimore County.

- a. Access to Care
- b. Accidents (falls)
- c. Cancer
- d. Dental Health
- e. Diabetes
- f. Food security
- g. Gun violence prevention
- h. Heart Disease/Stroke/Hypertension
- i. Maternal/Infant Health
- j. Mental Health/Suicide
- k. Primary and Preventive Health Care

- l. Obesity
- m. Sexually Transmitted Disease
- n. Substance Use/Alcohol Use
- o. Tobacco and Electronic Smoking Devices
- p. Housing
- q. Uninsured
- r. Other (please explain)
- s. None
- t. Unsure/Do not know
- u. Prefer not to respond

5. What resources are available in the community you serve to address the top health issues you identified?

6. Please share any additional information regarding these health issues and your reasons for ranking them this way.

7. In your opinion, which FIVE (5) of the following need the most improvement within the community you serve? If a need that requires the most improvement is not listed, please select "Other" and write it in.

- a. Access to affordable housing
- b. Access to healthy foods
- c. Access to public transit (buses, commuter rail, etc.)
- d. Access to recreation facilities, parks or playgrounds
- e. Access to substance use/alcohol use treatment
- f. Affordable childcare
- g. Availability of alternative transportation options (biking, walking, carpooling, etc.)
- h. Improved air quality
- i. Improved water quality
- j. Medication/local pharmacy access
- k. Reducing homelessness
- l. Reducing crime/violence
- m. Language/Immigrant services
- n. Other (please explain)
- o. None
- p. Unsure/Do not know
- q. Prefer not to respond

8. Please share any additional information regarding these needs and your reasons for prioritizing them.

9. In your opinion, which population sub-group(s) has the greatest need for additional resources within the community you serve? Please select all that apply. If a population sub-group that needs additional resources is not listed, please select "Other" and write it in.

- a. Black/African American community
- b. Children/Youth
- c. Hispanic/Latino community
- d. LGBTQIA+ community
- e. Justice-involved individuals
- f. Persons experiencing homelessness
- g. Persons in poverty
- h. Persons with disabilities
- i. Refugees/Immigrants
- j. Seniors/Elderly
- k. Uninsured population
- l. Women in pregnancy
- m. Young adults
- n. Youth in foster care
- o. Other (please explain) _____
- p. None
- q. Unsure/Do not know
- r. Prefer not to respond

10. Please share any additional information regarding these population sub-group(s) and your reasons for choosing them.

11. On a scale of 1 to 5 (with 1 being strongly disagree and 5 being strongly agree), please rate each of the following statements for the community you serve:

- a. Residents can access a doctor, including nurse practitioners and physician assistants (Family/General Practitioner, Ob/Gyn, Pediatrician) when needed.
- b. Residents can access a medical specialist (Cardiologist, Dermatologist, etc.) when needed.
- c. There are enough providers accepting Medicaid in the community.
- d. There are enough providers accepting Medicare in the community.
- e. There are enough providers accepting patients without insurance in the community.
- f. There are enough dentists in the community.
- g. There are enough culturally competent healthcare providers in the community.
- h. There are enough mental health providers in the community.
- i. There are enough substance abuse treatment providers in the community.

12. From the list provided, where do you feel most members of the community you serve most often seek medical care? Choose all that apply.

- a. Community Clinic
- b. Hospital/Medical Campus
- c. Emergency Department
- d. Walk-in or Urgent Care
- e. Primary care provider (physician, nurse, etc.)
- f. Health department
- g. Other (please specify): _____
- h. Do not seek care

13. Why do you think members of the community you serve primarily seek care in the location(s) you selected above? _____

14. What are the most significant barriers that keep people in the community you serve from accessing healthcare when they need it? Choose all that apply.

- a. Availability of providers/ appointments
- b. Basic needs not met (food/shelter)
- c. Gender biases
- d. Inability to navigate healthcare system
- e. Inability to pay out of pocket expenses (co pays, prescriptions)
- f. Lack of/limited childcare
- g. Lack of health insurance coverage
- h. Lack of/limited transportation
- i. Lack of trust
- j. Language/cultural barriers
- k. Racism
- l. Time limitations
- m. None/no barriers
- n. Other: _____

15. Please share any additional information regarding these barriers and your reasons for choosing them. _____

16. Do you believe health and social needs are similar across Baltimore County?

- a. Yes
- b. No
- c. Prefer not to answer

• [If “No”]:

- **In your opinion, which geographic areas experience the greatest level of need?** _____

- Please describe any unique health and social needs you have observed within these areas: _____

17. What challenges do older adults face in the community you serve?

18. Do you feel that the people in the community you serve are health literate, or able to understand health-related information?

- a. Yes
- b. No
- c. Prefer not to answer

19. What strategies do you find most effective in communicating information related to health or social needs to members of the community you serve?

20. On a scale of 1 to 5 (with 1 being strongly disagree and 5 being strongly agree), please rate each of the following statements for the community you serve:

- a. There are enough indoor places to get regular exercise or physical activity in the community you serve.
 - [If disagree or strongly disagree]: Please share any additional information related to the answer you selected.
- b. There are enough outdoor places to get regular exercise or physical activity in the community you serve.
 - [If disagree or strongly disagree]: Please share any additional information related to the answer you selected.

21. On a scale of 1 to 5 (with 1 being strongly disagree and 5 being strongly agree), please rate each of the following statements for the community you serve:

- a. Children and youth living in the community you serve have access to places to play and socialize outside of school.
 - [If disagree or strongly disagree]: What strategies could help address loneliness or social isolation in children/youth in the community you serve?
- b. Adults in the community you serve have access to places to socialize and build relationships outside of work or home.
 - [If disagree or strongly disagree]: What strategies could help address loneliness or social isolation in adults in the community you serve?

- c. Older adults in the community you serve have access to places to socialize and build relationships outside of the home.
- [If disagree or strongly disagree]: What strategies could help address loneliness or social isolation in older adults in the community you serve?

22. Have you already gotten, or do you plan to get, your annual flu shot?

- a. Yes
- b. No
- c. Prefer not to answer

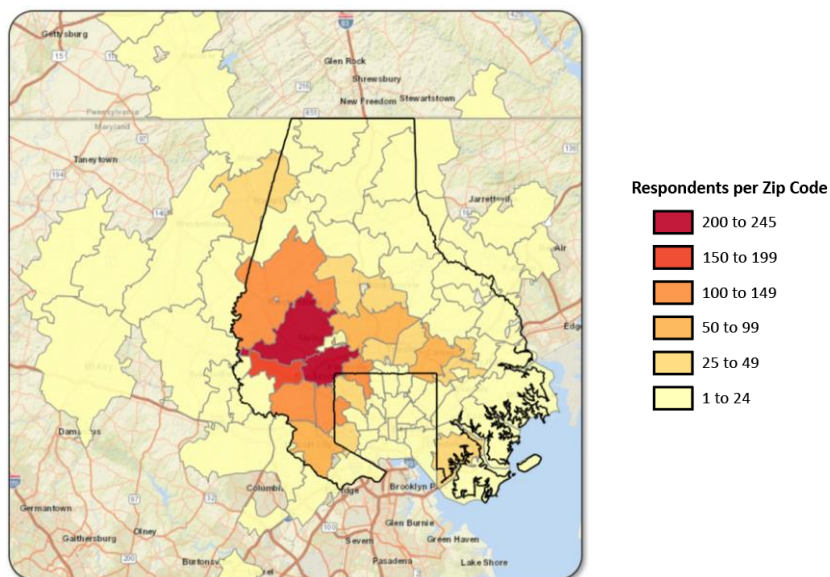
23. What ideas or suggestions do you have to improve health in the community you serve?

Thank you for completing the survey!

Community Survey

A total of 2,034 surveys were completed by individuals living, working or receiving healthcare in the Baltimore County community. For the sake of accessibility, the survey was available in both English and Spanish. Approximately 1% of the surveys were completed in Spanish. Consistent with one of the survey process goals, survey community member respondents were representative of a broad geographic area encompassing areas throughout the county. The map below provides additional information on survey respondents' ZIP code of residence.

Figure A6.10: Respondent Zip Code of Residence



In general, survey questions focused on:

- Community health problems and concerns
- Community social/environmental problems and concerns
- Access to healthcare
- Food insecurity
- Dental care

The key findings from the Community Survey are detailed below:

- Community members identified the top 3 health needs of Baltimore County as Heart Disease/High Blood Pressure, Overweight/Obesity, and Diabetes. These were followed very closely by mental health.
- Relative to areas that have the most impact on health, community members mentioned: violence and safety, and housing and homelessness.
- Community members identified the cost of care as the largest barrier to health in the community.
- The most common suggestions for improving community health were increasing affordability and insurance coverage, community outreach and programming, availability of grocery stores,

number of providers, transportation, mental health resources, education, safety, and mobile health services.

Charts detailing key findings from the Community Member Survey are displayed below:

Figure A6.11

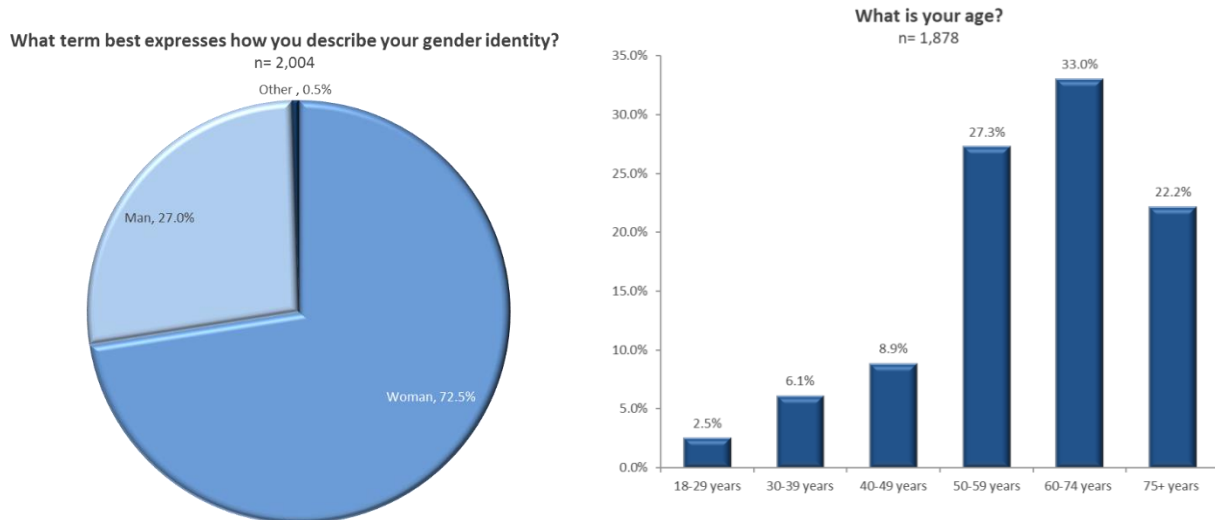


Figure A6.12

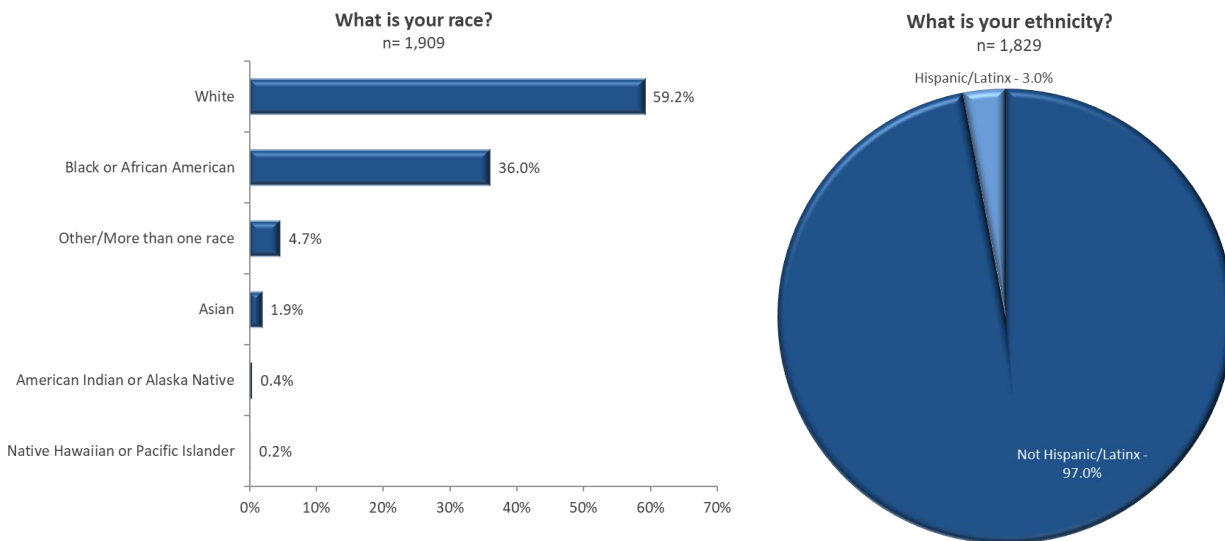


Figure A6.13

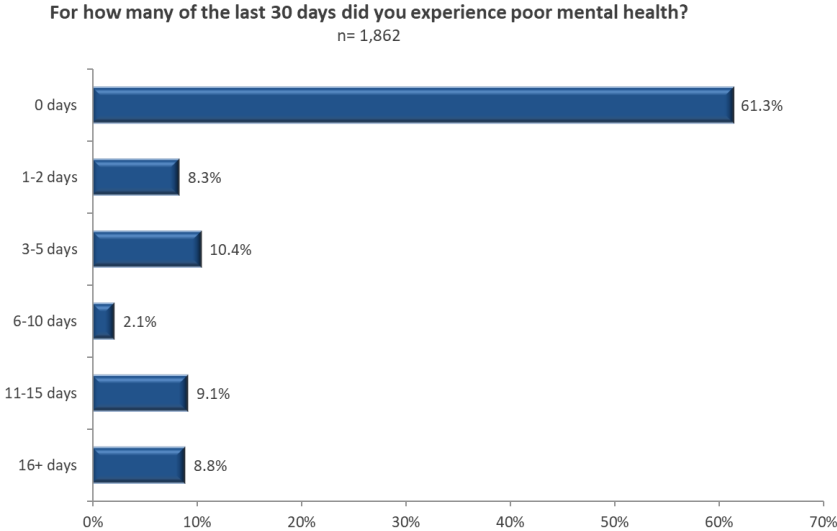


Figure A6.14

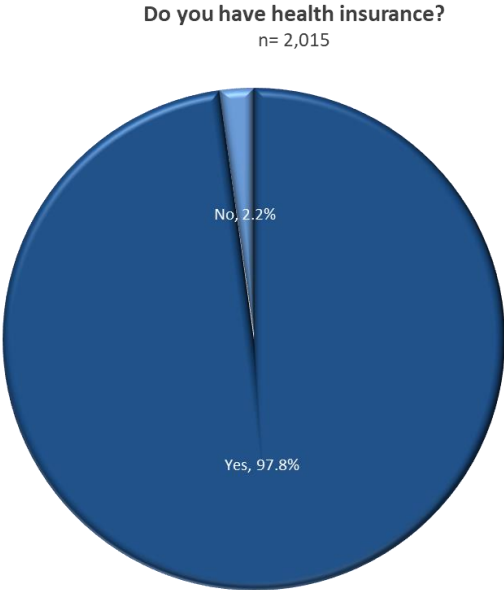


Figure A6.15

Please select the top FIVE (5) community health needs of Baltimore County.
n= 1,914

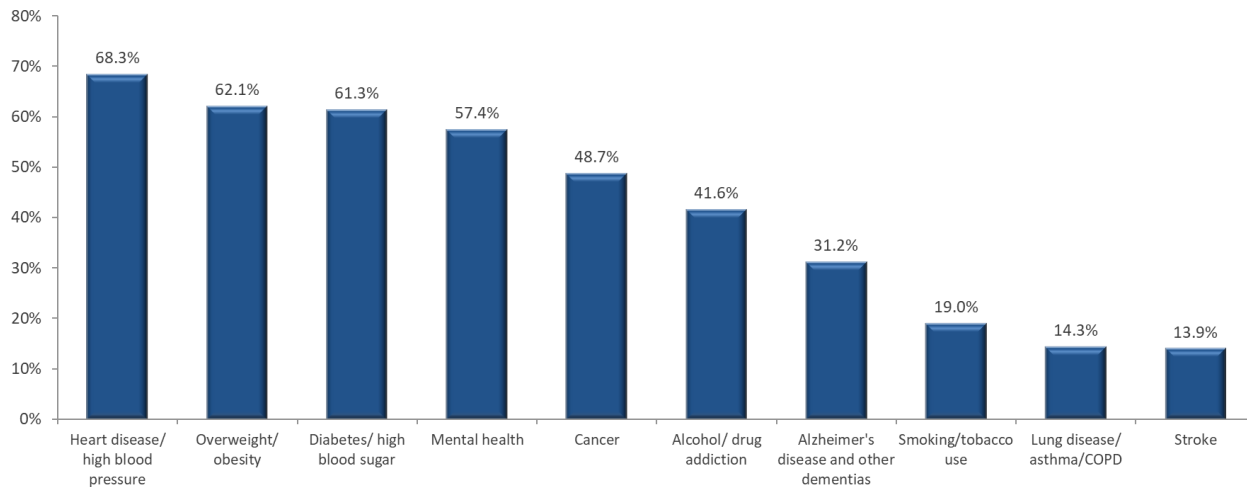


Figure A6.16

Choose the top 5 social needs that most impact the health of the community.
n= 1,810

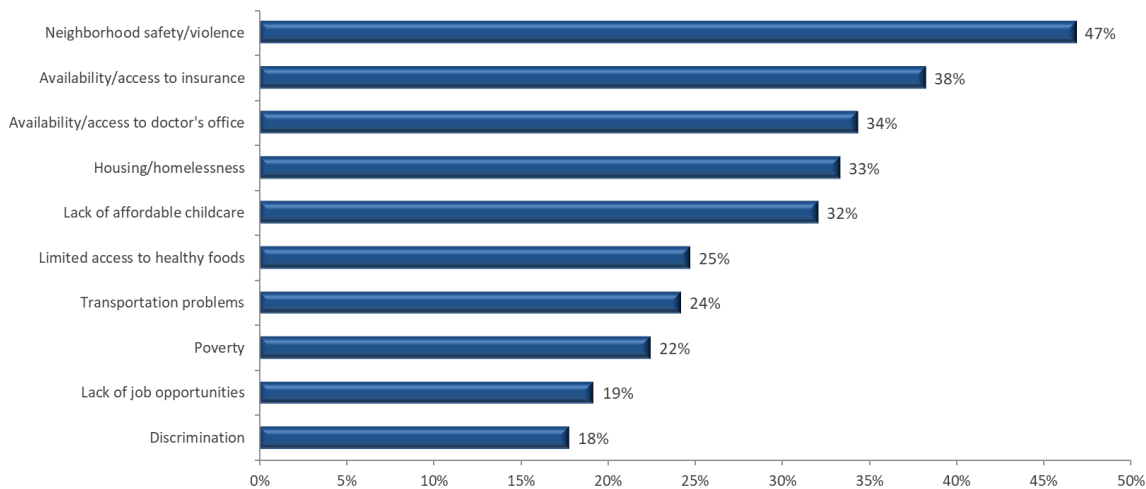


Figure A6.17

What barriers, if any, exist to improving the health of Baltimore County residents? *Choose all that apply.*
n= 1,832

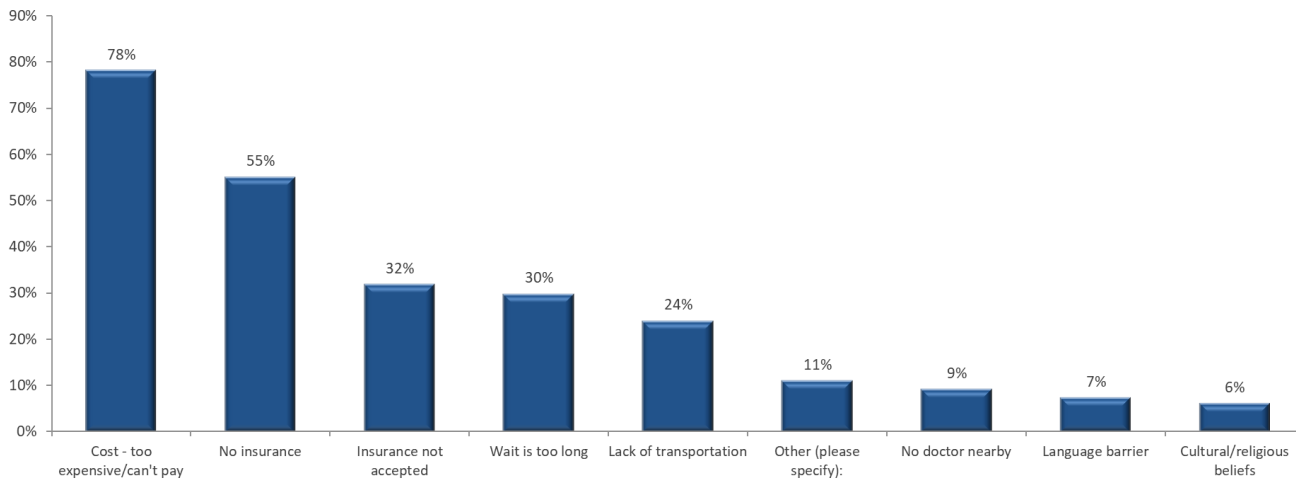
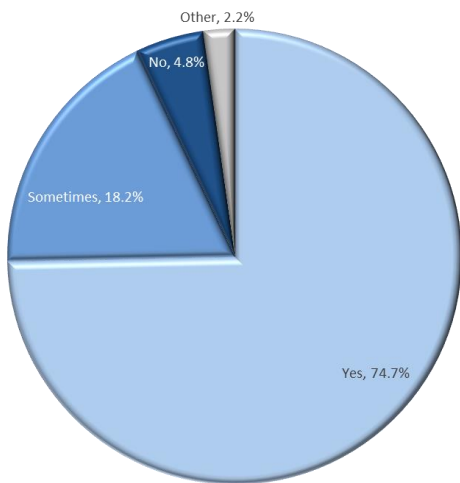
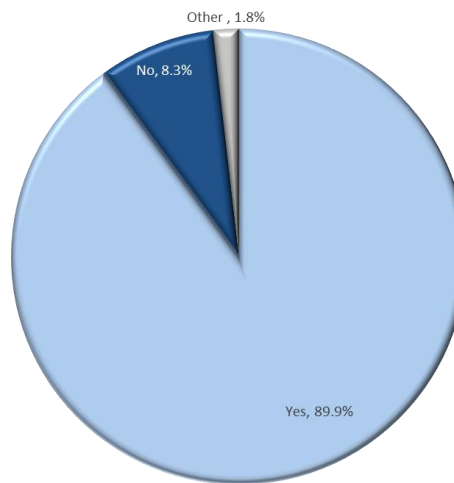


Figure A6.18

Do you have access to find healthy and affordable food?
n= 2,022



Do you have access to a dentist or dental services?
n= 2,018



The questions administered via the Community Member Survey instrument are below:

1. What is your ZIP code?

Please write 5-digit ZIP code. _____

2. Do you think of yourself as:

Please select one.

- Male
- Female
- Transgender man
- Transgender woman
- Gender queer/gender nonconforming, i.e., neither exclusively male nor female
- Other/Additional gender category (*please specify*): _____
- Prefer not to answer

3. What is your age group (years)?

Please select one.

- 18-29
- 30-39
- 40-49
- 50-64
- 65-74
- 75+
- Prefer not to answer

4. Which one of the following describes your race?

Please select all that apply.

- Black or African American
- White
- Asian
- Native Hawaiian or Pacific Islander
- American Indian or Alaska Native
- Other/more than one race (*please specify*): _____
- Prefer not to answer

5. Which one of the following is your ethnicity?

Please select one.

- Hispanic or Latino/a
- Non-Hispanic or Non-Latino/a
- Prefer not to answer

7. On how many days during the past 30 days was your mental health not good? Mental health includes stress, depression, and problems with emotions.

Please write the number of days.

_____ days

- Zero days
 Prefer not to answer

8. How frequently do you see your primary care provider (Medical Doctor, Nurse Practitioner)?

Please select one.

- 1 time per year
 2-3 times per year
 4 or more times per year
 I cannot get timely access to my primary care provider
 I do not have a primary care provider
 I use another medical provider option (emergency department, urgent care, GYN provider etc.)

9. Do you have health insurance?

Please select one.

- Yes
 No
 Prefer not to answer

10. What are the five most important health problems that affect the health of your community?

Please select up to five.

- Alcohol/drug addiction
 Alzheimer's disease and other dementias
 Mental health (depression/anxiety)
 Cancer
 Diabetes/high blood sugar
 Heart disease/high blood pressure
 HIV/AIDS
 Infant death
 Lung disease/asthma/COPD
 Stroke
 Smoking/tobacco use
 Overweight/obesity
 Other (*please specify*): _____
 Prefer not to answer

11. What are the five most important social/environmental problems that affect the health of your community?

Please select up to five

- Availability/access to doctor's office
- Availability/access to insurance
- Child abuse/neglect
- Discrimination (*Please specify type: age, gender, race, ability, etc.*): _____
- Domestic violence
- Housing/homelessness
- Lack of affordable childcare
- Lack of job opportunities
- Limited access to healthy foods
- Limited places to exercise
- Neighborhood safety/violence
- Limited opportunities for social connection
- Poverty
- School dropout/poor schools
- Transportation problems
- Other (*please specify*): _____
- Prefer not to answer

12. What are the three most important reasons people in your community do not get health care?

Please select up to three.

- Cost – too expensive/can't pay
- Wait is too long
- No insurance
- No doctor nearby
- Lack of transportation
- Insurance not accepted
- Language barrier
- Cultural/religious beliefs
- Other (*please specify*): _____
- Prefer not to answer

13. Do you have the ability to find healthy *and* affordable foods around where you live?

Please select one.

- Yes
- Sometimes
- No
- Other (*please specify*): _____
- Prefer not to answer

14. Do you have access to a dentist or dental services?

Please select one.

- Yes
- No
- Other (*please specify*): _____
- Prefer not to answer

15. What ideas or suggestions do you have to improve health in your community?

Thank you for completing the survey!

APPENDIX 7 | PRIMARY DATA SUMMARY

Primary data findings are summarized in full by the table below.

Priority Area	Community	Key Leaders	Focus Groups*
★ Access to Care	✓	✓	✓
★ Transportation	✓	✓	✓
★ Food Insecurity	✓	✓	✓
★ Chronic Diseases	✓	✓	
★ Health Literacy	✓	✓	
★ Behavioral Health/Mental Health	✓	✓	
★ Substance Use	✓	✓	
Housing and Homelessness	✓	✓	
★ Income and Employment		✓	
Overweight/Obesity	✓		
Education			✓
★ Violence and Safety		✓	✓
Family, Community & Social Support			✓

★ Top priority area from secondary data

*Focus group results are limited to the highest priority needs.