2019 Community Health Needs Assessment

Kaiser Foundation Health Plan of the Mid-Atlantic States, Incorporated

Approved by Kaiser Foundation Hospitals Board of Director's Community Health Committee

September 16, 2019

KAISER PERMANENTE®

Community Health Needs Assessment (CHNA) Report of the Kaiser Foundation Health Plan of the Mid-Atlantic States, Inc.

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[1] Additional appendices are available upon request (e.g. list of indicators, CHNA survey, interview protocol, scorecards and priority scores). Please email CHNA-communications@kp.org for more information.

I. Introduction

A. About Kaiser Permanente

Founded in 1942 to serve employees of Kaiser Industries and opened to the public in 1945, Kaiser Permanente is recognized as one of America's leading health care providers and nonprofit health plans. We were created to meet the challenge of providing American workers with medical care during the Great Depression and World War II, when most people could not afford to go to a doctor. Since our beginnings, we have been committed to helping shape the future of health care. Among the innovations Kaiser Permanente has brought to U.S. health care are:

- Prepaid health plans, which spread the cost to make it more affordable
- A focus on preventing illness and disease as much as on caring for the sick
- An organized, coordinated system that puts as many services as possible under one roof—all connected by an electronic medical record

Kaiser Permanente is an integrated health care delivery system comprised of Kaiser Foundation Hospitals (KFHP), Kaiser Foundation Health Plan (KFHP), and physicians in the Permanente Medical Groups. Today we serve more than 12 million members in nine states and the District of Columbia. Our mission is to provide high-quality, affordable health care services and to improve the health of our members and the communities we serve.

Care for members and patients is focused on their Total Health and guided by their personal physicians, specialists, and team of caregivers. Our expert and caring medical teams are empowered and supported by industry-leading technology advances and tools for health promotion, disease prevention, state-of-the-art care delivery and world-class chronic disease management. Kaiser Permanente is dedicated to care innovations, clinical research, health education and the support of community health.

B. About Kaiser Permanente Community Health

For more than 70 years, Kaiser Permanente has been dedicated to providing high-quality, affordable health care services and to improving the health of our members and the communities we serve. We believe good health is a fundamental right shared by all and we recognize that good health extends beyond the doctor's office and the hospital. It begins with healthy environments: fresh fruits and vegetables in neighborhood stores, successful schools, clean air, and safe, accessible parks and playgrounds.

However, it does not end there. If most of what contributes to your health happens outside of the doctor's office, in places where communities live, work, and play, fundamental definitions of health must also include conditions like peace, shelter, a stable eco-system, social justice, and equity[2]. Any improvement in health requires a secure foundation in these basic principles.

Our vision is a world where all people have a fair and just opportunity to be healthy[3]. Our commitment to achieving this vision is in part accomplished by our efforts to minimize health disparities and remove obstacles to optimal health, especially poverty, discrimination, and their

[2] World Health Organization. Milestones in health promotion: Statements from global conferences. Available from: https://www.who.int/healthpromotion/Milestones_Health_Promotion_05022010.pdf

[3] Robert Wood Johnson Foundation. Achieving Health Equity. Available from: www.rwjf.org/en/library/features/achieving-health-equity.html

consequences. Through our programs, grants and public policy advocacy, we make way for courageous conversations and decisive action about powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care. Kaiser Permanente's vision for health equity, where all people can achieve the healthiest life possible, is the basis for our community health strategies.

Better health outcomes begin where health starts, in our communities. Like our approach to medicine, our work in the community takes a prevention-focused, evidence-based approach. We go beyond traditional corporate philanthropy or grantmaking to pair financial resources with medical research, physician expertise and clinical practices. Our community health strategy focuses on three areas:

- Ensuring health access by providing individuals served at KP or by our safety net partners with integrated clinical and social services
- Improving conditions for health and equity by engaging members, communities, and Kaiser Permanente's workforce and assets
- Advancing the future of community health by innovating with technology and social solutions

For many years, we have worked side-by-side with other organizations to address serious public health issues such as obesity, access to care and violence. We have conducted Community Health Needs Assessments to better understand each community's unique needs and resources. The CHNA process informs our community investments and helps us develop strategies aimed at making long-term, sustainable change and it allows us to deepen the strong relationships we have with other organizations that are working to improve community health.

C. Purpose of the Community Health Needs Assessment

The Patient Protection and Affordable Care Act (ACA), enacted on March 23, 2010, included new requirements for nonprofit hospitals in order to maintain their tax-exempt status. The provision was the subject of final regulations providing guidance on the requirements of section 501(r) of the Internal Revenue Code. Included in the new regulations is a requirement that all nonprofit hospitals must conduct a community health needs assessment (CHNA) and develop an implementation strategy (IS) every three years (http://www.gpo.gov/fdsys/pkg/FR-2014-12-31/pdf/2014-30525.pdf). The required written IS plan is set forth in a separate written document. Both the CHNA Report and the IS for each Kaiser Foundation Hospital and Health Plan are available at https://www.kp.org/chna. As a non-hospital region, Kaiser Foundation Health Plan of the Mid-Atlantic States, Inc. (KPFH-MAS) voluntarily complies with federal requirements.

D. Kaiser Permanente's approach to the Community Health Needs Assessment

Kaiser Permanente has conducted CHNAs for many years, often as part of long-standing community collaboratives. The new federal CHNA requirements have provided an opportunity to revisit our needs assessment and strategic planning processes with an eye toward enhanced compliance and transparency and leveraging emerging technologies. Our intention is to develop and implement a transparent, rigorous and whenever possible, collaborative approach to understanding the needs and assets in our communities. From data collection and analysis to the identification of prioritized needs and the development of an implementation strategy, the intent was to develop a rigorous process that would yield meaningful results.

Kaiser Permanente's innovative approach to CHNAs include the development of a free, web-based CHNA data platform that is available to the public. The data platform provides access to a core set of approximately 120 publicly available indicators to understand health through a framework that includes social and economic factors, health behaviors, physical environment, clinical care and health outcomes.

In addition to reviewing the secondary data available through the CHNA data platform, and in some cases other local sources, each KFHP, individually or with a collaborative, collected primary data through key informant interviews, focus groups and surveys. Primary data collection consisted of reaching out to local public health experts, community leaders, and residents to identify issues that most impacted the health of the community. The CHNA process also included an identification of existing community assets and resources to address the health needs.

Each hospital/collaborative developed a set of criteria to determine what constitutes a health need in their community. Once all the community health needs were identified, they were prioritized, based on identified criteria. This process resulted in a complete list of prioritized community health needs. The process and the outcome of the CHNA are described in this report.

In conjunction with this report, the Kaiser Foundation Health Plan of the Mid-Atlantic States, Inc. (KFHP-MAS) will develop an implementation strategy for the priority health needs that the health plan will address. These strategies will build on Kaiser Permanente's assets and resources, as well as evidence-based strategies wherever possible. Both the CHNA and the Implementation Strategy, once finalized, will be posted on our website, https://www.kp.org/chna.

II. Community served

A. Kaiser Permanente's definition of community served

Kaiser Permanente defines the community served as those individuals residing within its service area. A service area includes all residents in a defined geographic area surrounding its medical facilities and includes low-income or underserved populations.

B. Map and description of community served

i. Map

KFHP-MAS operates in 30 locations, serving more than 770,000 members in Maryland, Virginia and the District of Columbia. The Mid-Atlantic States region is comprised of three service areas: Greater Baltimore (BALT), District of Columbia/Suburban Maryland (DCSM) and Northern Virginia (NOVA). A map of KFHP-MAS service areas is presented below.

Figure 1: Map of KFHP-MAS communities

The KFHP-MAS community is comprised of 32 counties and cities, including:

- The District of Columbia
- The following Virginia jurisdictions: Alexandria City, Arlington County, Fairfax City, Fairfax County, Falls Church City, Fredericksburg City, King George County, Loudoun County, Manassas City, Manassas Park City, Prince William County, Spotsylvania County, Stafford County
- Portions of the following jurisdictions in Virginia: Caroline County, Culpepper County, Fauquier County, Hanover County, Louisa County, Orange County, Westmoreland County
- The following Maryland jurisdictions: Anne Arundel County, Baltimore City, Baltimore County, Carroll County, Harford County, Howard County, Montgomery County, Prince George's County
- Portions of the following jurisdictions: Calvert County, Charles County, Frederick County

Note: The secondary data collected for this report utilized data from all 32 counties. Please see section IV, A for information about how these data were weighted.

ii. Geographic description of the community served

Cities and counties from the KFHP-MAS region were selected for inclusion in the CHNA based on the following criteria: 1) the city or county contains a Kaiser Permanente Medical Office Building (MOB), and 2) the population of the city or county represents at least 1% of the population served within the Mid-Atlantic States region. Table 1 displays the 15 cities and counties selected for CHNA inclusion based on these criteria.

Table 1: List of cities and counties selected for inclusion in the CHNA

BALT	DCSM	NOVA
Anne Arundel County	District of Columbia	Alexandria City
Baltimore City	Frederick County	Arlington County
Baltimore County	Montgomery County	Fairfax County
Harford County	Prince George's County	Loudoun County
Howard County		Prince William County
		Stafford County

The following cities and counties did not meet the established criteria for inclusion in the CHNA: Calvert County, Carroll County, Charles County, Caroline County, Culpeper County, Fairfax City, Falls Church City, Fauquier County, Fredericksburg City, Hanover County, King George County, Louisa County, Manassas City, Manassas Park City, Orange County, Spotsylvania County and Westmoreland County.

Note: The primary data collected for this report utilized data from the aforementioned 15 counties and cities, as these were more reflective of the KFHP-MAS footprint, current investments and relationships. See section IV, B for information about how data were collected and analyzed.

iii. Demographic profile of the community served

An overall demographic profile of the region is presented in **Table 2**. Data for each of the cities and counties included in this report are presented by service area in **Tables 3-5**.

Table 2: Demographic profile for KFHP-MAS

Race/ethnicity		**Socioeconomic data**	
Total Population	8,560,810	Living in poverty (<100% federal poverty level)	9.2%
Race		Children in poverty	11.9%
Asian	8.5%	Unemployment	3.8%
Black	27.2%	Adults with no high school diploma	9.7%
Native American/Alaska Native	0.3%		
Pacific Islander/Native Hawaiian	0.1%		
Some other race	4.3%		
Multiple races	3.6%		
White	56.1%		
Ethnicity			
Hispanic	12.1%		
Non-Hispanic	87.9%		

Table 3: Greater Baltimore service area demographic profile

	Anne Arundel County	Baltimore City	Baltimore County	Harford County	Howard County
Population	559,737	621,000	825,666	249,776	308,447
Median household income	$91,918	$44,262	$68,989	$81,052	$113,800
Race/Ethnicity					
White	74.4%	30.3%	62.9%	79.8%	59.5%
Black	15.9%	63.0%	27.5%	13.5%	18.3%
Asian	3.6%	2.5%	5.8%	2.6%	16.7%
Hispanic	7.0%	4.8%	4.9%	4.1%	6.4%
Adults with no HS diploma	8.1%	16.5%	9.0%	7.2%	4.7%
Population with any disability	10.2%	15.3%	11.5%	10.8%	7.2%
Uninsured	6.0%	9.0%	7.4%	4.6%	5.1%
Below 100% FPL	6.1%	23.1%	9.3%	7.7%	4.9%
Children below 100% FPL	7.1%	33.3%	12.0%	9.8%	5.8%
Unemployed	3.3%	5.6%	4.0%	3.6%	3.1%
Median age	38.3	34.7	39.1	40.3	38.7

Table 4: District of Columbia/Suburban Maryland service area demographic profile

	District of Columbia	Frederick County	Montgomery County	Prince George's County
Population	681,170	243,465	1,026,371	897,693
Median household income	$75,506	$85,715	$100,352	$75,925
Race/Ethnicity				
White	40.7%	81.3%	55.2%	19.4%
Black	47.1%	9.1%	17.8%	63.5%
Asian	3.9%	4.4%	14.6%	4.2%
Hispanic	10.9%	8.4%	18.6%	16.7%
Adults with no HS diploma	9.5%	7.4%	8.8%	14.2%
Population with any disability	11.3%	10.2%	7.9%	9.1%
Uninsured	3.9%	6.1%	9.3%	12.9%
Below 100% FPL	18.6%	7.1%	6.9%	9.7%
Children below 100% FPL	25.8%	9.7%	8.7%	13.7%
Unemployed	5.7%	3.5%	3.2%	4.1%
Median age	33.9	39.2	38.6	36.1

Table 5: Northern Virginia service area demographic profile

	Alexandria City	Arlington County	Fairfax County	Loudoun County	Prince William County	Stafford County
Population	151,473	226,092	1,148,433	362,435	443,630	139,548
Median household income	$89,200	$108,706	$114,329	$125,672	$98,546	$97,528
Race/Ethnicity						
White	62.7%	72.2%	65.2%	67.3%	60.4%	69.3%
Black	21.6%	8.6%	10.4%	7.3%	20.6%	17.1%
Asian	6.5%	10.0%	20.0%	16.7%	7.9%	3.3%
Hispanic	16.7%	15.6%	16.2%	13.3%	21.9%	11.2%
Adults with no HS diploma	8.6%	6.2%	8.3%	6.5%	11.0%	6.5%
Population with any disability	6.9%	5.4%	4.2%	5.5%	7.2%	8.6%
Uninsured	14.3%	7.2%	9.3%	7.5%	12.5%	7.8%
Below 100% FPL	9.8%	8.7%	6.0%	4.0%	7.0%	5.1%
Children below 100% FPL	15.2%	--%	7.5%	4.0%	10.3%	7.1%
Unemployed	2.1%	1.8%	3.0%	2.3%	2.5%	2.8%
Median age	36.2	34.1	38.1	35.5	34.4	35.0

III. Who was involved in the assessment?

Maya Nadison, Ph.D., M.H.S.: Dr. Nadison led the 2019 KFH-MAS CHNA, overseeing the quantitative and qualitative data collection and analysis, the data triangulation methodology and the CHNA report writing. She earned her Ph.D. from the Johns Hopkins Bloomberg School of Public Health, focusing on health communication and education sciences. She has extensive experience in program evaluation, quantitative and qualitative data collection and analysis, message development, creation of educational material, and report writing for diverse audiences. Her research interests relate to the design, implementation, and evaluation of school and community-based interventions focused on the prevention of risk behaviors.

Tanya Edelin, C.P.A., P.M.P.: Ms. Edelin provided general oversight of the CHNA process. As Director of Community Health Strategy and Operations, Ms. Edelin leads the development and execution of data-informed initiatives to improve the health of the communities served by Kaiser Permanente. She also leads the region's community health and wealth strategic agenda engaging all Kaiser Permanente assets for impact on population health through creative, innovative strategies that create shared value.

Jessica Minor, B.S., M.P.P.: Ms. Minor supported qualitative data collection and drafted sections of the CHNA report. She is currently a Program Coordinator at Kaiser Permanente Community Health, where she manages data for all contributions and the sponsorship program. Previously, she worked as a Public Health Program Manager at the Association of University Centers on Disability. Ms. Minor has a special interest in health disparities, specifically as it relates to people with disabilities and other minority populations.

Center for Community Health and Evaluation: (CCHE) assisted with primary data collection and analysis. For over 25 years, CCHE has provided evaluation, assessment and strategic consulting services to foundations and health organizations to improve community health. CCHE brings experience conducting tailored needs assessments and engaging stakeholders to conduct planning and to prioritize strategies based on data.

Mah Afroze Chughtai Zain, Ph.D. candidate: Ms. Chughtai supported the quantitative data collection and analysis process. She is currently pursuing her Ph.D. in Public Policy at the University of Maryland. Ms. Chugtai holds a bachelor's and master's degree in economics. Her research interests include database management, survey design and agent-based modeling.

Pamela Vega, B.S., M.H.A. Candidate: Ms. Vega supported the data triangulation process and drafted sections of the CHNA report. She is working towards her master's degree in Health Administration with a concentration in Nonprofit Management and Leadership at the University of Maryland, College Park. Ms. Vega has a background in public health, which exposed her to the reality that an individual's ZIP code is a predictor of their health and well-being. This exposure led her to serve both in Montgomery County and Prince George's County, Maryland as a volunteer to promote population health.

IV. Process and methods used to conduct the CHNA

A. Secondary data

i. Sources of secondary data

In order to maintain consistency with other KP regions, KFHP-MAS used the Kaiser Permanente CHNA Data Platform (http://www.chna.org/kp) to review approximately 120 indicators from publicly available data sources. The nationally available common indicators collectively provide insight into the overall health of a community.

The KP CHNA Data Platform is a web-based resource with pre-populated national, state and county-level data. Data on gender and race/ethnicity breakdowns were included for analysis where available. Secondary data for this report was obtained from the platform from June 2018 through October 2018. As the platform is undergoing continual enhancements, certain data may have been updated since they were obtained for this report. For the most recent data and/or additional health data indicators, please visit www.chna.org/kp. For more details on data sources, please see **Appendix A**.

ii. Methodology for collection, interpretation and analysis of secondary data

Kaiser Permanente's CHNA Data Platform is a web-based resource provided to our communities as a way to support community health needs assessments and community collaboration. This platform includes a focused set of community health indicators that allow users to understand what is driving health outcomes in particular neighborhoods. The platform provides the capacity to view, map and analyze these indicators as well as understand racial/ethnic disparities and compare local indicators with state and national benchmarks.

Data at the service area level: Secondary data were downloaded from the platform and presented by service area. Service area estimates were generated using population-weighted allocations from county-level data. For service areas that fall entirely within one county, the reported indicator value is the value for the county. For service areas that cross multiple county boundaries, estimates are aggregated from each county that fall within the service area and are weighted by the total population of that county. As an example, only 62% of Calvert County falls within the District of Columbia/Suburban Maryland (DCSM) service area. Therefore, data from Calvert county was weighted to account for the fact that only 62% of county falls within DCSM. All weighting calculations were performed within the CHNA data platform.

Benchmarking: Benchmarking is a critical component of the CHNA process that facilitates comparison of city and county data to national data, thus revealing a community health need. For the KFPH-MAS CHNA, city and county level data were compared to national averages. Although a scan of national and local assessments revealed that both national and state averages can be used as benchmarks, it was not feasible to use the state average given that the DCSM service area crosses state lines (i.e. State of Maryland and the District of Columbia).

Indicators selected for inclusion in the CHNA were heterogeneous in regard to what and how they are measured and expressed (e.g. rates, counts). Therefore, they were standardized using "z-scores" - converting them to unit-free measures by computing the population-weighted mean,

variance and standard deviation of the sample. Indicators were identified as poorly performing against the national benchmark if the z-score was less than -0.5.

Health disparities: According to the Department of Health and Human Services, health disparities are defined as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage"[4]. In an effort to identify health differences, racial/ethnic disparity data were incorporated into the analysis when available. Approximately 15% of the indicators selected for analysis were broken down by race. For consistency, disparity data were also identified as poorly performing against the national benchmark when the z-score was less than -0.5. The result of the benchmarking and racial/ethnic disparity calculations generated a list of secondary data identified health needs by service area.

B. Community input

i. Description of who was consulted

Community input was provided by a broad range of community members using key informant interviews and surveys. Individuals with the knowledge and expertise relevant to the health needs of the community were consulted. These individuals included representatives from state, local or other regional governmental public health departments (or equivalent department or agency) as well as leaders, representatives, or members of medically underserved, low-income, and minority populations. Where applicable, other individuals with expertise of local health needs were consulted. For a complete list of individuals who provided input, see **Appendix B**.

Community input complemented the quantitative data by adding context and providing a deeper understanding of the unique needs of their communities. As members of the communities, input gleaned from the members themselves offered specialized knowledge of community conditions, available resources and relevant solutions.

ii. Methodology for collection and interpretation

In-depth interviews: Between August and September 2018, a total of 20 telephone interviews with 22 health officials representing each of the 15 CHNA counties and cities were conducted. Only leaders who were not interviewed during the 2016 CHNA were interviewed to avoid duplicate data collection. In addition to local Public Health Departments, key informants from State Health Departments' Office of Health Equity were interviewed in order to gain a fuller understanding of needs in relation to health equity. Interviews were confidential and interviewers adhered to standard ethical research guidelines.

Conversations were audio-recorded with the permission of the interviewee and a scribe provided written records of the discussion. Each interview lasted about 45 minutes. Interviewees identified community health needs as well as existing community collaborations, assets and resources to address identified health needs. Interviewees ranked community health needs based on

[4] United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Healthypeople.gov: Disparities. Available from: https://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities.

perceived severity and detailed promising solutions and strategies to address the identified health needs.

Transcriptions of the interviews were provided for qualitative analysis. Using grounded theory techniques[5] and a code list based on the interview protocol and 13 health needs, the CHNA team members organized and grouped quotations by health need or other domain. Quotations were further analyzed to identify sub-themes within each health need, such as geographic areas, sub-populations with greater need, or key factors behind the health need. The CHNA team produced a coding memo for each service area to summarize frequencies, key quotes, and sub-themes. Sub-codes were generated for two health needs: 1) economic security data were coded for food, housing, and/or education, and 2) access was coded for transportation, access to mental health services, perceived lack of quality health care, lack of insurance and/or access to substance abuse services. Interview data were summarized to generate frequencies for each health need by service area and region.

Survey: Surveys provided a unique advantage during the 2019 KFHP-MAS CHNA health needs identification and prioritization process as they facilitated the collection of data from a relatively large sample at a low cost. The survey method was ideal because it provided participants with a standardized tool for reporting identified health needs, thus reducing biases in interpretation. Finally, the survey method provided an opportunity for more stakeholders to be involved in the health needs identification and prioritization process than would otherwise have been possible with interviews alone.

A sample of 216 community leaders with knowledge of the Mid-Atlantic States service areas were invited to participate in the online survey in September and October 2018. The ten-minute survey included both open and closed-ended questions. Each respondent was asked to assign a severity score to prominent health needs (poor health outcomes as well as underlying risk factors, or drivers). Respondents were also given the opportunity to write in health needs that were not previously identified, highlighting potentially overlooked health challenges. Lastly, each respondent ranked their top three health needs in their respective communities.

Of the 216 stakeholders asked to respond to the web-based survey, 103 responded to some questions, although the number of respondents by question varied. Of the respondents who completed the entire survey,19 represented the BALT service area, 38 the NOVA service area, and 28 the DCSM service area. More than half of the individuals who completed the survey represented the human services (24%), education (17%) and health care (17%) sectors.

Questions from the web-based survey were analyzed according to whether they were closed or open-ended questions. Frequencies were generated for the closed-ended questions in order to understand severity of health needs or health factors. Data from open-ended questions were analyzed using qualitative methods. Participants identified the top three health needs and factors

[5] Strauss, A., & Corbin, J. (1990). Basics of qualitative research. Sage publications.

and identified the questions about sub-populations or geographic areas disproportionately affected. Thematic analysis was utilized to analyze the data for common themes by service area. A list of health needs by service area was generated based on analysis of their severity scores. Health needs receiving an average score of 2.5 or higher ("moderate to very severe") by multiple respondents within the same service area ranked as one of the top three community health needs and were flagged for further consideration.

C. Written comments

KP provided the public an opportunity to submit written comments on the health plan's previous CHNA report through CHNA-communications@kp.org. This opportunity will continue to be available for the community to comment on the most recently conducted CHNA report.

By the time this current CHNA report was written, KFHP-MAS had not received written comments about previous CHNA reports. Kaiser Permanente will continue to track any submitted written comments and ensure that relevant submissions will be considered and addressed by the appropriate staff.

D. Data limitations and information gaps

Secondary data: The KP CHNA data platform includes approximately 120 secondary indicators that provide timely, comprehensive data to identify the broad health needs faced by a community. However, there are some limitations with regard to these data, as is true with any secondary data. Some data were only available at a county level, making an assessment of health needs at a neighborhood level challenging. Furthermore, disaggregated data around age, ethnicity, race, and gender are not available for all data indicators, which limited the ability to examine disparities of health within the community. Lastly, data are not always collected on a yearly basis, meaning that some data are several years old.

Primary data: The interview data reflect the views of one person from each county, which may or may not be representative of the county's population as a whole and is based on the information to which that person has access. A limitation of the CHNA survey is that respondents do not represent all 15 KP-designated CHNA cities and counties. An additional limitation is with regard to non-responses. To minimize this limitation, 18 surveys with missing data were eliminated from the analysis.

V. Identification and prioritization of the community's health needs

A. Identifying community health needs

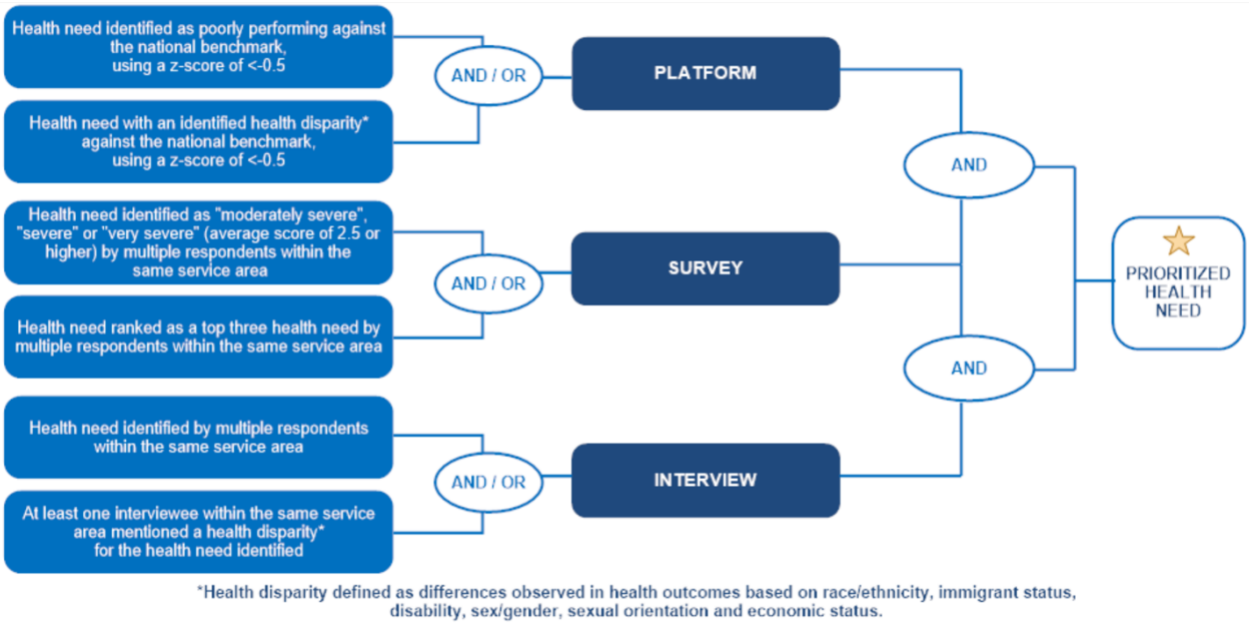
i. Definition of "health need"

For the purposes of the CHNA, Kaiser Permanente defines a "health need" as a health outcome and/or the related conditions that contribute to a defined health need. Health needs are identified by the comprehensive identification, interpretation and analysis of a robust set of primary and secondary data.

ii. Criteria and methods used to identify the community health needs

The triangulation design is the most common approach to mixed methods[6]. The goal of this design is to complement the strengths and weaknesses of quantitative methods (large sample size, trends, generalization) with those of qualitative methods (small sample size, details, in-depth). Consistent with the triangulation design, data were collected separately and then converged to compare and contrast results. Each method was assigned the same weighting, ensuring that valid and well-substantiated conclusions about health needs were identified[7].

Figure 2: Data triangulation approach



Analysis of the data generated three sets of health needs presented by service area and data source. Identified health needs were then sorted into one of three tiers based on the amount of data indicating a need. The three-tiered approach is defined as follows:

- **Tier 1:** Only one source of data (secondary or survey or interview) indicates a need
- **Tier 2:** Any two sources of data (secondary and/or survey or interview) indicate a need
- **Tier 3:** All three sources of data (secondary and survey and interview) indicate a need

[6] Creswell, J. W., Gutmann, M. L., and Hanson, W. E. (2003). Advanced mixed methods research designs. Handbook of mixed methods in social and behavioral research: p. 209-240.
[7] Creswell, J. W. and Miller, D. L. (2000). Determining validity in qualitative inquiry. Theory into practice, 39(3): p. 124-130.

B. Process and criteria used for prioritization of health needs

The focus of this report is on the Tier 3 identified health needs by service area since these were triangulated by all three data collection methodologies (platform, survey and interview). A priority score was computed for Tier 3 health needs to rank them in importance from highest to lowest.

Before beginning the prioritization process, KFHP-MAS established the following criteria to prioritize the list of health needs.

- **Severity of need:** This refers to how severe the health need is (such as its potential to cause death or disability) and its degree of poor performance against the relevant benchmark. Severity was assessed through the CHNA survey. Each survey respondent assessed the severity of health needs and drivers based on a scale of 1 to 4 (4 representing a “very severe” issue). The score for each health need was totaled and then divided by the number of respondents to obtain a value between 1 and 4 that remained interpretable. For example, an average between 3 and 4 could be interpreted as a health issue having a “severe” to “very severe” impact on the community. The final severity score value was added to the priority score for each health need.

- **Magnitude/scale of the need:** The magnitude refers to the number of people affected by the health need. Using platform data, one point was assigned to the priority score for health needs that had a corresponding indicator with a z-score of less than -0.5 compared to a national benchmark.

- **Disparities or inequities:** This refers to differences in health outcomes by subgroups. Subgroups may be based on geography, language, ethnicity, culture, citizenship status, economic status, sexual orientation, age, gender or other category. Racial/ethnic disparity data were collected from the platform data and the in-depth interviews. Disparity was assessed in two ways: 1) using the platform data, any health need with an identified health disparity against the national benchmark (z-score of less than -0.5), resulting in one point being added to the priority score, and 2) the mention of a disparity for a specific health need by at least one interviewee within the same service area resulted in another point being added to the priority score.

- **Community priority:** Community priority was assessed in two ways: 1) from the interviews, one point was added to the priority score when multiple respondents within the same service area mentioned a health need as being in the top three for a particular county/city, and 2) one point was added to the priority score if multiple survey respondents within the same service area ranked a health need as being in the top three for a particular county/city.

Priority score assignment: Tier 3 identified health needs were assigned a priority score based on the following: 1) racial disparities (confirmed by secondary and interview data); 2) severity of the issue (verified by survey data); 3) community prioritization of the issue (supported by interview data and survey data) and 4) magnitude of the health need (confirmed by secondary data). The priority score was then used to generate a list of top health needs in each of the three service areas, with the highest score representing the greatest need.

The list of ranked health needs is presented by service area in order of priority in **Table 6.**

Table 6: CHNA identified health needs by KFHP-MAS service area

BALT	DCSM	NOVA
1. Economic security	1. Economic security	1. Access to care
2. Obesity/HEAL*/Diabetes	2. Access to care	2. Mental health
3. Substance abuse/Tobacco	3. Obesity/HEAL/Diabetes	3. Economic security
4. Access to care	4. CVD/Stroke	4. Obesity/HEAL/Diabetes
5. Mental health	5. Maternal and infant health	
6. Maternal and infant health	6. Substance abuse/Tobacco	
7. Cancers	7. Cancers	
8. HIV/AIDS/STDs	8. HIV/AIDS/STDs	
9. Climate and health	9. Violence/Injury prevention	

** HEAL stands for Healthy Eating Active Living*

Regional aggregation: The final task involved aggregating service area findings to provide a regional overview of identified health needs. Similar to the triangulation approach outlined above, regional health needs were identified as those Tier 3 health needs appearing in all three service areas. Mental health and substance abuse were grouped together to form a behavioral health need. To rank order regional health needs, priority scores for each health need were totaled for each service area. The results of this exercise are summarized in table 7.

Table 7: CHNA identified health needs for the KFHP-MAS region

REGIONAL HEALTH NEEDS
1. Economic security
2. Access to care
3. Obesity/HEAL/Diabetes
4. Behavioral health (including substance use)

C. Descriptions of community needs identified through the CHNA

Community needs 1 through 4: Economic security, access to care, obesity/HEAL/diabetes and behavioral health were identified as community needs in all three services areas.

1. **Economic security:** A growing body of research[8] has demonstrated a strong association between socioeconomic status and health outcomes among various subgroups of the population. On average, people with low socioeconomic status experience poorer health and a lower life expectancy than people with high socioeconomic status[9]. Low socioeconomic status has been demonstrated to negatively affect people's ability to access healthcare services and understand information regarding their own health. These factors negatively impact a person's behavioral and physiological wellbeing, leading to the onset of illness. A person with low economic security may have significant difficulties accessing healthy foods and is more likely to live in less safe neighborhoods and experience discrimination, which may prohibit engagement in healthy behaviors. Additionally, people living in poverty may experience chronic stress leading to high levels of cortisol and adrenaline in the blood stream. Over time, activation of the stress response mechanism increases people's risk of obesity, diabetes, cardiovascular disease, cancer and mental health conditions[10].

   Economic security was identified as the highest health need in the KFHP-MAS region. In the Baltimore service area, 10.9% of the population lives below 100% of the Federal Poverty Line (FPL), compared to 10.1% in the District of Columbia/Suburban Maryland, and 6.7% in Northern Virginia (national benchmark: 15.4%). Moreover, health disparities were observed in the percent of adults without a high school diploma – Hispanics (33.1%) and Native American/Alaskan Natives (17.7%) were least likely to complete high school compared to the national benchmark (13.2%).

> *"We've got more millennials and more white people moving into urban areas which is kicking up the cost of living in those areas there [and] displacing the people who have historically been there. That is a major factor that is leading to some housing insecurity because what we're really seeing is the suburbanization of poverty."*
>
> Key informant for Fredericksburg City

[8] Lynch, J. W., Smith, G. D., Kaplan, G. A., & House, J. S. (2000). Income inequality and mortality: importance to health of individual income, psychosocial environment, or material conditions. BMJ, 320(7243), 1200-1204.

[9] Adler, N. E., & Stewart, J. (2010). Health disparities across the lifespan: meaning, methods, and mechanisms. Annals of the New York Academy of Sciences, 1186(1), 5-23.

[10] Stress and your health: MedlinePlus Medical Encyclopedia. (n.d.). Available from: https://medlineplus.gov/ency/article/003211.htm

2. **Access to care:** Access to high quality healthcare services is essential for individuals to lead healthy lives. Comprehensive access to healthcare services prevents disease among people, promotes health maintenance and reduces the risk of preventable disability and premature death. Factors which affect an individual's ability to receive comprehensive medical care include insurance status, living in areas with a shortage of healthcare professionals and access to culturally competent healthcare providers[11].

   Approximately 8.7% of the KFHP-MAS region population is uninsured compared to the national benchmark (11.6%). While better than the national average, this health need is still quite significant when considering racial/ethnic disparities where 26.4% of Hispanics, 11.5% of Native American/Alaskan Natives, 10.8% of Asians, 10.3% of Native Hawaiians/Pacific Islanders, 8.5% of Blacks and 4.3% of Whites are uninsured in the Mid-Atlantic States region.

> *"We are especially having difficulty with our immigrant population, whether they're documented or undocumented, requesting or seeking health services or any other services that are related to any type of government intervention."*
>
> Key informant from Alexandria City

> *"Even though we have a lot of opportunity for access to health insurance through Medicaid expansion, we do still have a rather significant number of people who are uninsured or under insured […]. We have found that with certain populations, like transgender [individuals], stigma is an issue that keeps folks from access to health care and staying in a treatment program."*
>
> Key informant from Baltimore City

3. **Obesity/HEAL/Diabetes:** In the United States, obesity has become an epidemic with 40% of the population (or 93 million people) considered obese[12]. Healthy eating and an active lifestyle can contribute to the prevention of the onset of illness and the progression of complications related to illness. Factors that affect healthy eating include difficulties accessing healthy food due to a lack of nearby groceries stores, and ready access to a high density of fast food restaurants. Disparities related to physical activity include an individual's inability to exercise in the areas where they live or work.

   Nutritious and affordable food options are inaccessible for populations in multiple counties across the KHFP-MAS region. For instance, 23.8% of the Baltimore City population and 15.5% of the Prince George's Population have experienced food insecurity in the past year (national

[11] Hood, C. M., Gennuso, K. P., Swain, G. R., and Catlin, B. B. (2016). County health rankings: Relationships between determinant factors and health outcomes. American Journal of Preventive Medicine, 50(2): p. 129-135.
[12] Adult obesity facts | Overweight & Obesity | CDC. (2018, August 14). Available from: http://www.cdc.gov/obesity/data/adult.html

benchmark:14.3%). Furthermore, the percentage of obese adults in Baltimore City (33.5%), Prince George's County (33.0%) and Stafford County (29.0%) trail the national benchmark (27.5%).

> *"We have challenges with concentrated areas of poverty that make it difficult to engage in some healthy behaviors. If you don't have access to grocery store, or don't feel safe in neighborhood you don't want to be outside walking or exercising."*
>
> Key informant from Baltimore City

4. **Behavioral health (including substance use):** Behavioral health includes both mental health and substance abuse disorders. In the U.S., an estimated one in five adults live with mental illness[13]. Throughout a person's lifespan, social, economic and physical conditions affect their mental health and wellness and in extreme cases can lead to suicide. Factors which affect mental health and wellness include education/employment options, ability to live in safe neighborhoods, and access to high quality and affordable healthcare[14]. Substance abuse disorder is often associated with mental health - sometimes occurring together. People with poor mental health have an increased risk of substance abuse disorder. Substance abuse has also been identified as a risk factor for cardiovascular disease, lung disease, stroke, cancer, and communicable diseases[15].

   In the KHFP-MAS region, the number of beer, wine and liquor stores per 10,000 population is significantly elevated in the Baltimore region (2.4 per 10,000) and in the District of Columbia/Suburban Maryland (2.0 per 10,000) compared to the national benchmark (1.1 per 10,000). Additionally, racial and ethnic disparities in the suicide death rate per 100,000 population were observed - non-Hispanic Whites have a significant disparity at 12.2 per 100,000 compared to non-Hispanic Blacks (5.21 per 100,000), non-Hispanic Asians (5.36 per 100,000), and Hispanics (2.51 per 100,000).

> *"I think when it comes to behavioral health and mental health, a lot of what we're seeing is there is not enough access to services, specifically to treatment when individuals are ready to enter a recovery for substance use disorder."*
>
> Key informant from Baltimore City

[13] National Institute of Mental Health. (2017). Mental illness. Available from: https://www.nimh.nih.gov/health/statistics/mental-illness.shtml

[14] Abuse, N. I. on D. (2012). Health Consequences of Drug Misuse. Available from: https://www.drugabuse.gov/related-topics/health-consequences-drug-misuse

[15] U.S. Department of Health & Human Services, MentalHealth.gov. Mental Health and Substance Use Disorders (2017). Available from: https://www.mentalhealth.gov/what-to-look-for/mental-health-substance-use-disorders

"The greatest need at this point in our community is mental health services. I think that something that we worry about doing assessments on folks because we have no place to send them in regard to both mental and behavioral health. It is difficult for all income levels to get these services just because there are not enough providers in the community."

Key informant from Prince William County

Community needs 5 through 10: Maternal and infant health, cancers, HIV/AIDS/STDs, CVD/stroke, climate and health, and violence/injury prevention were identified as community needs in one or two of the services areas.

5. **Maternal and infant health:** Identified as a need in BALT and DCSM, maternal and infant health refers to the health of expectant mothers and their infants during pregnancy, and after childbirth. Promoting positive health outcomes during and after pregnancy is critical to prevent future illness of the mother and child. Factors associated with maternal and infant health include age of the expectant mother, access to prenatal care and economic security. An unhealthy pregnancy can lead to miscarriage, low birth weight and premature death[16].

   In the KFHP-MAS region, the rate of infant deaths per 1,000 births is higher in multiple counties compared to the national benchmark (6.5 per 1,000 births). Infant death rate was reported at 12.4 per 1,000 births in Baltimore City, 10.6 per 1,000 births in the District of Columbia, and 7.8 in Stafford County. Furthermore, minority populations were found to significantly trail the national benchmark with an infant death rate of 9.7 per 1,000 births.

"We get data from the hospital for the number of infants that are exposed to substances or are born with substance dependency. That number skyrocketed within the past few years, directly correlated with the opioid epidemic."

Key informant from Hartford County

"We are notorious in the state for having one of the highest teen pregnancy rates, which we have consciously worked on for many years and has significantly gone down. […] We have a large immigrant population and a lot of girls come here already pregnant before we get to them, so we do provide prenatal care and encourage LARC (long-acting reversible contraception) insertion 6 weeks post-delivery."

Key informant from Alexandria City

[16] Center for Disease Control, Maternal and Infant Health. Available at: https://www.cdc.gov/reproductivehealth/maternalinfanthealth/index.html

6. **Cancers**: Identified as a need in BALT and DCSM, cancer is the second leading cause of death in the United States, costing the lives of more than 500,000 people annually. Cancer can be caused by inherited genetic tendencies, and/or environmental factors (e.g., chemicals in tobacco smoke, or radiation from ultraviolet sun rays), which promote the formation of cancerous cells[17]. The earlier a person is diagnosed with cancer, the higher the likelihood that treatments will be successful, and prevention if possible is an even better strategy.

   Throughout the KFHP-MAS region, the incidence of breast cancer and prostate cancer is elevated compared to the national benchmark. In addition, the age-adjusted rate of death due to cancer per 100,000 population among the Black population (180 per 100,000) is elevated in comparison to the national benchmark (163 per 100,000).

> *"African American residents are getting screened [for cancer] sooner and closer to the appropriate diagnostic age but were still having higher mortality rates and worse survival rates at 5-year intervals."*
>
> Key informant from Montgomery County

7. **HIV/AIDS/STDs:** Identified as a need in BALT and DCSM, human immunodeficiency virus (HIV) is a sexually transmitted disease (STD) that affects a person's immune system leading to the risk of acquired immunodeficiency syndrome (AIDS). Risk factors for HIV include unsafe sex practices and having multiple sexual partners. Once diagnosed, improper treatment and management of HIV/AIDS may lead to further illness and premature death. Additionally, having an STD (e.g., chlamydia or syphilis) may increase the risk of HIV infection[18].

   Multiple counties in the KFHP-MAS region have higher incidence rates of chlamydia and HIV/AIDS. For instance, compared to the benchmark (357.2 per 100,000) the prevalence of HIV/AIDS is 2695.7 per 100,000 in the District of Columbia and 2414.3 per 100,000 in Baltimore City.

> *"Everyone thinks about females and their pap smears but what is rising is male incidence of HPV".*
>
> Key informant from Howard County

[17] Cancer Statistics, National Cancer Institute. Available from: https://www.cancer.gov/about-cancer/understanding/what-is-cancer

[18] National Institute of Health, HIV and Sexually Transmitted Diseases. Available from: https://aidsinfo.nih.gov/understanding-hiv-aids/fact-sheets/26/98/hiv-and-sexually-transmitted-diseases--stds-

8. **CVD/Stroke:** Identified as a need in DCSM, heart disease is the leading cause of death for both men and women in the United States[19]. Cardiovascular disease (CVD) pertains to various illnesses which affect the cardiovascular system (e.g., the heart and blood vessels). CVD conditions may result from a variety of factors including a family history of CVD, a coexisting condition, environmental factors, and poor lifestyle choices. It is important to note that many of these conditions are a result of built-up plaque within arterial walls. CVD conditions include hypertension, congestive heart failure, heart attack, arrhythmias and stroke. Early diagnosis and management of disease are necessary to prevent CVD from progressing into further illness, disability or premature death.

   In the KFHP-MAS region, racial and ethnic disparities in stroke deaths are stark with non-Hispanic Blacks having a rate of 43.6 deaths per 100,000 population compared to non-Hispanic Whites (32.9 per 100,000), non-Hispanic Asians (26.1 per 100,000), and Hispanics (21.7 per 100,000).

> *"When we look at chronic disease outcomes, there are significant disparities across a host of those conditions that can be sliced by racial and ethnic backgrounds, there is some disparity between genders in some of the outcomes and there's also some disparities depending upon where you live in the county."*
>
> Key informant from Montgomery County

9. **Climate and health**: Identified as a need in BALT, a person's environmental living conditions may negatively affect their health and well-being. Rising temperatures, extreme weather events, poor water quality and the built environment of a community may lead to an increase in illness and premature death. For instance, communities living near railroads and highways may experience a disproportionate level of traffic-related pollution which has been associated with an increased risk of cardiovascular disease[20]. Additionally, people living in communities with limited transportation options may suffer from challenges accessing healthcare services. At the same time, dependence on driving is associated with physical inactivity and obesity, and exposes us to air pollution, which in turn is associated with asthma, cardiovascular disease, pre-term births and premature death[21].

   The percentage of the population with long work commutes in the Baltimore region is 46%, in the District of Columbia/Suburban Maryland region is 55% and in the Northern Virginia region is 51.2% – all trail the national benchmark (32.8%). Additionally, the Mid-Atlantic States region trails behind the national average when it comes to health-based violations in community

[19] Jemal, A., Ward, E., Hao, Y., & Thun, M. (2005). Trends in the leading causes of death in the United States, 1970-2002. JAMA, 294(10), 1255-1259.

[20] American Public Health Association. Transportation and Health. Available from: https://www.apha.org/topics-and-issues/transportation

[21] Robert Wood Johnson Foundation. (2012). How does transportation impact health? Health Policy Snapshot Public Health and Prevention Issue Brief. Available from: http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2012/rwjf402311

water systems. This indicates overall poor drinking water safety, a prerequisite for good health.

> *"For someone with a car [it is] not a big issue [to access social services] but certainly for older residents in the community, individuals who may not have a car or individuals with disabilities, it is significantly harder to access those services by the county because transportation is such a big issue. They don't have social services offices or outpost [in rural areas]."*
>
> Key informant from Montgomery County

10. **Violence/Injury prevention:** Identified as a need in DCSM, violence in communities affects the health of victims and families. This health need is associated with existing disparities in economic status, social capital, and social trust[22]. Neighborhoods with high rates of violent crime may also experience higher rates of physical injuries and adverse impacts on mental health. Excessive alcohol use is associated with poor community safety, homicide, suicide, sexual assault and intimate partner violence[23]. Addressing the underlying factors of violence within a neighborhood may reduce the rate of preventable injuries.

    The rates of violent crimes in the Baltimore region (625 per 100,000) and the District of Columbia/Suburban Maryland region (526.9 per 100,000) are significantly higher than the national benchmark (378.3 per 100,000). Moreover, in the KFHP-MAS region, multiple counties have elevated rates of beer, wine and liquor stores per 10,000 population.

> *"We want to raise awareness of suicidality and be mindful of suicide as a contagion. With that awareness approach, we are working with school systems and having them at the table."*
>
> Key informant from the District of Columbia

[22] U.S. Department of Housing and Urban Development, Office of Policy Development and Research. Neighborhoods and Violent Crime. [Website]. Available from: https://www.huduser.gov/portal/periodicals/em/summer16/highlight2.html

[23] World Health Organization (2018). Global status report on alcohol and health. Available from: http://www.who.int/substance_abuse/publications/global_alcohol_report/en/

D. Community resources potentially available to respond to the identified health needs

KFHP-MAS service areas contain community-based organizations, government departments and agencies, hospital and clinic partners and other community members and organizations engaged in addressing many of the health needs identified in this assessment.

Key resources available to respond to the identified health needs of the community are listed in **Appendix D**. The community resources selected for inclusion were those mentioned by the key informants when asked about assets to address their top three health needs in their respective communities.

VI. KFHP-MAS 2016 Implementation Strategy evaluation of impact

A. Purpose of 2016 Implementation Strategy evaluation of impact

KFHP-MAS's 2016 Implementation Strategy Report was developed to identify activities to address health needs identified in the 2016 CHNA. This section of the CHNA Report describes and assesses the impact of these activities. For more information on KFHP-MAS's Implementation Strategy Report, including the health needs identified in the health plan's 2016 service area, the health needs the health plan chose to address, and the process and criteria used for developing Implementation Strategies, please visit: https://share.kaiserpermanente.org/wp-content/uploads/2013/10/KFHP-MAS-IS-Report.pdf.

For reference, below is a prioritized list of the health needs addressed by KFHP-MAS in the 2016 Implementation Strategy Report.

1. **Socioeconomic security**
2. **Health care access**
3. **Mental health**

KFHP-MAS is monitoring and evaluating progress to date on its 2016 Implementation Strategies for the purpose of tracking implementation and documenting the impact of those strategies in addressing selected CHNA health needs. Tracking metrics for each prioritized health need include the number of grants made, the number of dollars spent, the number of people reached/served, collaborations and partnerships and KFHP in-kind resources. In addition, KFHP-MAS tracks outcomes, including behavior and health outcomes, as appropriate and where available.

The impacts detailed below are part of a comprehensive measurement strategy for Community Health. KP's measurement framework provides a way to 1) represent our collective work, 2) monitor the health status of our communities and track the impact of our work, and 3) facilitate shared accountability. We seek to empirically understand two questions 1) how healthy are Kaiser Permanente communities, and 2) how does Kaiser Permanente contribute to community health? The Community Health Needs Assessment can help inform our comprehensive community health strategy and can help highlight areas where a particular focus is needed and support discussions about strategies aimed at addressing those health needs.

As of February 2019, KFHP-MAS had evaluation of impact information on activities from 2017 and 2018. These data help us monitor progress toward improving the health of the communities we serve. While not reflected in this report, KFHP-MAS will continue to monitor impact for strategies implemented in 2019.

B. 2016 Implementation Strategy evaluation of impact overview

In the 2016 IS process, all KFHP hospital facilities planned for and drew on a broad array of resources and strategies to improve the health of our communities and vulnerable populations, such as grantmaking, in-kind resources, collaborations and partnerships, as well as several internal KFHP programs including: charitable health coverage programs, future health professional training programs, and research. Based on years 2017 and 2018, an overall summary of these strategies is below, followed by tables highlighting a subset of activities used to address each prioritized health need.

KFHP programs: In 2017 and 2018, KFHP supported several health care and coverage, workforce training, and research programs to increase access to appropriate and effective health care services and address a wide range of specific community health needs, particularly impacting vulnerable populations. These programs included:

- **Medicaid:** Medicaid is a federal and state health coverage program for families and individuals with low incomes and limited financial resources. KFHP provided services for Medicaid beneficiaries, both members and non-members.
- **Medical Financial Assistance:** The Medical Financial Assistance (MFA) program provides financial assistance for emergency and medically necessary services, medications, and supplies to patients with a demonstrated financial need. Eligibility is based on prescribed levels of income and expenses.
- **Charitable Health Coverage:** Charitable Health Coverage (CHC) programs provide health care coverage to low-income individuals and families who have no access to public or private health coverage programs.
- **Workforce Training:** Supporting a well-trained, culturally competent, and diverse health care workforce helps ensure access to high-quality care. This activity is also essential to making progress in the reduction of health care disparities that persist in most of our communities.
- **Research:** Deploying a wide range of research methods contributes to building general knowledge for improving health and health care services, including clinical research, health care services research, and epidemiological and translational studies on health care that are generalizable and broadly shared. Conducting high-quality health research and disseminating findings publicly and in peer-reviewed scientific literature increases awareness of the changing health needs of diverse communities, addresses health disparities, and improves effective health care delivery and health outcomes.

Grantmaking: For 70 years, Kaiser Permanente has shown its commitment to improving community health through grantmaking to charitable, community-based organizations. KFHP-MAS awards grants in support of projects/programs that address the social determinants of health

and which target the elimination of health disparities and inequities. From 2017-2018, KFHP-MAS awarded **68** grants totaling **$6.5M**, in alignment with the 2016 CHNA. Grant awards were supported directly by KFHP-MAS or indirectly, by the Kaiser Permanente Fund for Community Benefit, a donor-advised fund administered by the Greater Washington Community Foundation.

In-kind resources: Kaiser Permanente's commitment to Community Health means reaching out far beyond our membership to improve the health of our communities. Volunteerism, community service and providing technical assistance and expertise to community partners are critical components of Kaiser Permanente's approach to improving the health of all of our communities. In 2017, **969** KFHP-MAS employees participated in **305** unique events logging approximately **5,460** hours of service. In 2018, **754** employees participated in **42** events logging an estimated **7,833** hours of service. From 2017-2018, KFHP-MAS leveraged significant organizational assets in service of 2016 Implementation Strategies and health needs, including:

- **Martin Luther King, Jr. Day of Service**: KFHP-MAS has a long tradition of honoring the legacy of Dr. Martin Luther King Jr.'s call to serve by providing rewarding opportunities for employees to get involved. In 2016 and 2017 employees and their families supported youth and local schools in the Baltimore-Washington Metro area.

- **NBC4 Health & Fitness Expo** is the largest, best-attended Consumer Wellness Expo in the country, with 85K+ attendees every year. KFHP-MAS featured interactive and fun educational activities for the whole family including screenings at the Mobile Health Vehicle, getting fit with exercise anytime/anywhere, and engaging attendees with careers in healthcare.

Collaborations and partnerships: Kaiser Permanente has a long history of sharing its most valuable resource – their talented staff and their knowledge and expertise. By working together with partners (including nonprofit organizations, government entities and academic institutions), these collaborations and partnerships can make a difference in promoting thriving communities that produce healthier, happier and more productive people. From 2017-2018, KFHP-MAS engaged in several partnerships and collaborations in alignment with the 2016 CHNA and Implementation Strategy, including:

- **Future Baltimore** is a flagship partnership for West Baltimore between Kaiser Permanente, Bon Secours Community Works and many more partners that is addressing the social, economic, and health needs of residents in West Baltimore's ZIP code 21223. The partnership brings together the full assets of two anchor institutions in Baltimore, as well as neighborhood leaders from the Boyd Booth, Fayette Street Outreach, and Franklin Square communities, who are committed to enhancing the long-term to the welfare of residents. The centerpiece of the partnership is the renovation of a long-shuttered library at 31 S. Payson Street, which will be transformed into a community resource center that houses economic, health, and social services supported by an array of local partners. In 2018, Future Baltimore accepted U.S. Department of Housing and Urban Development (HUD) Secretary's Award for Public-Philanthropic Partnerships from the Council on Foundations, a national award that recognizes cross-sector partnerships between the

philanthropic and public sectors that increase the quality of life for low- and moderate-income residents across all American geographies.

- **ICCC:** Inner City Capital Connection is a national program designed to help CEOs of small businesses in economically distressed areas learn to build their capacity for growth in revenue, profitability and employment. KFHP-MAS collaborated with the mayor's office of Small, Minority and Women-Owned Businesses, and Initiative for Competitive Inner Cities (ICIC) to bring the program to Greater Baltimore in 2018.

- **Grantee Convening:** In September 2018, KFHP-MAS Community Health held a day-long workshop for 30 current grantees and their key community partners, which included social service organizations, federally qualified health centers and free clinics. The event, entitled *Advancing Health Equity Through Community Collaboration*, provided technical advice and guidance regarding the development and management of meaningful community partnerships as a key strategy in achieving health equity. The event offered networking opportunities for attendees and set the stage for more robust local collaborations.

C. 2016 Implementation Strategy evaluation of impact by health need

Financial data included in the evaluation of impact section were up-to-date as of October 31, 2018. Awards made to grantees in Fall 2016 were included in the evaluation of impact section since the grant-funded work was conducted in 2017 and beyond. Performance data from grantees are collected at least 6 months after the original grant award, indicating a lag between the financial data and the performance data.

Need	Summary of impact	Examples of most impactful efforts
Access to care	During 2017 and 2018, KFHP-MAS invested **$312.8M** in medical care services for vulnerable patients through charity care programs (Medicaid, MFA and CHC).	**KP programs/initiatives** KP Medicaid and Charity Care: KP provided care to **80,545** and **77,069** Medicaid members in 2017 and 2018 respectively - totaling **$152.6M**. Through the Medical Financial Assistance (MFA) program, KP served **100,039** and **99,761** patients in 2017 and 2018 respectively - totaling **$115.8**. KP also provided Charitable Health Coverage (CHC) to **9,493** members in 2017 and **10,082** members in 2018 – totaling **$44.4M**.
Access to care	During 2017 and 2018, KP awarded **16** grants, totaling **$1.2M** to provide clinical, dental and social services to the most vulnerable.	**Philanthropy** ALL/PHASE: NOVA Scripts Central received **$210K** in funding for their ALL/PHASE program, an evidence-based program to improve health outcomes for diabetic and hypertensive patients aged 50 and over. Since 2017, NOVA Scripts Central reached **1,435** patients. Clinical services: KFHP-MAS awarded **$519K** to organizations that focuses on health care services for immigrant and homeless populations, resulting in **7,812** unique clients being screened and referred to medical services, and over **800** receiving free specialty care. Dental services: KFHP-MAS awarded **$202K** to screen and refer over **1,000** patients to available community dental (and other medical) services. Additionally, **184** children received free oral health services. Social services: KFHP-MAS awarded **$327K** in grants to Federally Qualified Health Centers and other similar organizations which provided social services (including wrap-around, case management services, coordinating referrals) to **3,036** individuals in Northern Virginia.
Access to care	In 2017-2018, KFHP-MAS invested **$12.3M**, while leveraging core functions and assets across KP to	**Leveraging assets** Case Management: KFHP-MAS supported the Patient Transportation Assistance Program (PTAP) to coordinate the transportation of low-income patients to attend their

	drive access to care in the Mid-Atlantic States region.	medical appointments. PTAP provided **2,166** and **2,655** free rides in 2017 and 2018 respectively, totaling **$808K.** Permanente Medical Group: KFHP-MAS invested **$235K** in a public health program, Good Health Great Hair (GHGH), in partnership with three West Baltimore City barbershops and beauty salons. Since 2017, GHGH provided over **2,600** preventative screenings and administered **251** flu shots to West Baltimore residents. GHGH also offers social services, including tele-fitness, to meet the needs of the patient population. Labor Management Partnership: The Community Ambassador Program (CAP) places KP-employed nurse practitioners, midwives, and physician assistants to work in the safety-net clinics and to share best practices through a long-term community collaboration. Community Ambassadors had over **44,000** patient encounters in 2017 and **36,000** patient encounters in 2018, totaling **$6.3M**. Research: KFHP-MAS funded **$5.0M** to support the Mid-Atlantic Permanente Research Institute (MAPRI) to increase ongoing efforts to incorporate vital medical research in improving the health of the community through knowledge dissemination. Since 2017, MAPRI published **121** peer-reviewed articles and abstracts related to cancer, HIV, and other health conditions.
Mental health	Since 2017, KFHP-MAS invested **$170K** in KP programs to provide school-based mental health interventions.	**KP programs/initiatives** Trauma-informed care: The Thriving Schools Resilience in School Environments (RISE) initiative integrates trauma-informed practices into the school environment. In 2017, **50** teachers in one school were trained to implement resiliency strategies for themselves and their students. Social-emotional well-being: KFHP-MAS invested **$170K** in the Youth Leadership Program, an after-school program that uses arts-based learning to promote a strong sense of self, coping skills, and positive peer relationships. Since 2017, the program reached **72** at-risk students throughout the region.
Mental health	Since 2017, KFHP-MAS awarded **5** grants, totaling **$570K** to improve mental	**Philanthropy** Grief counseling: KFHP-MAS invested **$150K** in grief counseling programs in Baltimore, and reached **977** elementary, middle and high school students, trained **16** mentors to

	health and wellness for teachers, staff and students.	work with high school students, and provided grief counseling workshops to **28** teachers and parents. Mental health resources and services: KFHP-MAS awarded **$420K** in grants to Main Street Child Development and similar organizations to provide direct mental health services to **328** children. Additionally, **385** preschoolers met developmental benchmarks toward social-emotional goals and school readiness.
Mental health	In 2017-2018, KFHP-MAS invested **$62K** to engage in conversations and shift norms related to mental health and wellness.	**Leveraging assets** Workforce health: The Thriving Schools Mini-Grant program provides **$2,500** per school to change school policies, environments, and practices to promote and position teacher/staff health and wellness as an integral part of the school culture. A total of **25** mini-grants were awarded in Prince George's county during the 2017-2018 academic year.
Economic security	In 2017-2018, KFHP-MAS invested **$2.5M** to prepare students for careers at livable wages, and to build the capacity of small businesses.	**KP programs/initiatives** College and career readiness: KFHP-MAS invested in programs to prepare students for college and/or careers: **50** high school students participated in a separate public-school academic track designed to help them achieve a high school diploma and associate degree from an accredited community college within 6 years. Additionally, **559** students between the ages of 16-24 were placed in summer, clinical and non-clinical internships throughout the region in 2017 and 2018. Capacity building for nonprofits: KFHP-MAS invested **$1.6M** to enhance leadership for social change among a selected group of **11** Baltimore City grassroots organizations. These organizations received training to increase nonprofit capacity to address social determinants of health and promote equitable experiences and life outcomes.
Economic security	Since 2017, KFHP-MAS awarded **32** grants, totaling **$3.7M** to promote equitable community development and create job opportunities.	**Philanthropy** Place-based: KFHP-MAS invested **$2.5M** in a place-based initiative, Future Baltimore, a flagship partnership with Bon Secours Community Works. Future Baltimore provides workforce development, mental health services, economic development, and the planning, design, and construction of a community resource center**.** To highlight some early successes: Future Baltimore screened **452** adults and children for eligibility and

		directed them to available community services; **53** individuals were trained in First Responder Trauma Informed Care; **42** individuals graduated with CNA/GNA certificates with **80%** job placement; **175** elementary school students were reached with food access support through school-based initiatives; and **30** returning citizens were enrolled in job training programs with **60%** job placement. Academic and career support: KFHP-MAS invested **$1.0M** over 3 years in the Ready for Work Champions for Career and College Ready Graduates program in three Prince George's county high schools. The program aims to help students gain the skills and knowledge needed to be successful in the workforce. To highlight some early successes, **2,023** high school students were exposed to a peer-driven college and career preparation campaign, **67** high school students were provided with intensive case management, mentoring, and referrals, **358** high school students received academic and career support services, and **6** interns placed in local businesses.
	In 2018, KFHP-MAS invested **$54K** to build small business capacity and drive economic prosperity in Baltimore City.	**Leveraging assets** Supplier diversity: Inner City Capital Connection (ICCC) drives economic prosperity through small business capacity building and private sector investment to create jobs, income and wealth for Baltimore's residents and communities. In 2018, **78** small businesses participated in the program, of which **53%** are woman-owned, and **84%** minority-owned.

VII. Appendices

Appendix A. Secondary data sources and dates

SOURCES	DATE
1. American Community Survey	2009-2013
2. Annie E. Casey Foundation, National KIDS COUNT	2015
3. Behavioral Risk Factor Surveillance System	2012
4. CDC, Wide-ranging Online Data for Epidemiologic Research (WONDER)	2014
5. Center for Medicare & Medicaid Services, Provider of Services File	2015
6. Centers for Medicare and Medicaid Services	2012
7. County Business Pattern	2013
8. County Health Ranking	2014
9. Dartmouth Atlas of Health Care	2012
10. Environmental Protection Agency	2011
11. FBI Uniform Crime Reports	2014
12. Food Access Research Atlas	2010
13. Food Environment Atlas	2011
14. Health Resources and Services Administration	2015
15. National Center for Chronic Disease Prevention and Health Promotion	2012
16. National Center for Education Statistics	2010
17. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention	2010
18. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention	2010
19. National Environmental Public Health Tracking Network	2010
20. National Highway Traffic Safety Administration	2009-2013
21. National Vital Statistics System	2009-2013
22. National Vital Statistics System	2009-2014
23. Neilson	2014
24. State Cancer Profiles	2012

Appendix B. Community input tracking form

i. List of key informants

Title	Organization
1. Director	Maryland Department of Health
2. Deputy Health Officer	Anne Arundel Department of Public Health
3. Deputy Commissioner	Baltimore City Department of Public Health
4. Deputy Health Officer	Baltimore County Department of Public Health
5. Chief Quality Improvement	Baltimore County Department of Public Health
6. Medical Director	Howard County Health Department
7. Policy Analyst	Harford County Health Department
8. Director	District of Columbia Department of Health*
9. Senior Deputy Director	District of Columbia Department of Health*
10. Coordinator	District of Columbia Department of Health*
11. Health Officer and Chief	Montgomery County Department of Public Health
12. Epidemiologist	Prince George's County Health Department
13. Epidemiologist	Prince George's County Health Department
14. Director	District of Columbia Department of Health
15. Community Health Services	Frederick County Department of Public Health
16. Nurse Manager	Prince William Health District Health Department
17. Community Health Planner	Rappahannock Area Health District
18. Program Officer	Northern Virginia Health Foundation
19. Nurse Manager	Loudoun County Department of Public Health
20. Management Analyst	Fairfax County Government
21. Nurse Manager	Alexandria Health Department
22. Director	Virginia Department of Health

** These individuals were interviewed together.*

ii. List of survey respondents

Title	Organization
1. Executive Director	Central Kenilworth Avenue Revitalization CDC
2. Assistant Professor	Morgan State University School of Social Work
3. Director	Community Foundation for Northern Virginia
4. Senior Director	Enterprise Community Partners
5. Executive Director	Prince William Area Free Clinic
6. Executive Director	Northern Virginia, Urban Alliance
7. Executive Director	Mobile Medical Care
8. Director	Community Health Development, Fairfax County Health Department
9. Chief Development Officer	Catholic Charities
10. President	Institute for Public Health Innovation
11. Chief Executive Officer	DC Primary Care Coalition
12. Executive Director	Roberta's House
13. Director	Northern Virginia Family Services
14. Executive Director	Edu-Futuro
15. Program Officer	Washington Area Women's Foundation
16. Director	Association of Baltimore Area Grantmakers
17. Executive Director	Liberty's Promise
18. Assistant Division Chief	Arlington County, Public Health Division
19. President & CEO	The SkillSource Group, Inc
20. CEO/Scout Executive	Baltimore Area Council, BSA
21. Family Nurse Practitioner	Esperanza Center
22. Health Director/Division Chief	Arlington County Public Health Division
23. Founding Partner	ZERO Model: NoVa
24. Officer	DC Department of Parks and Recreation
25. Director	NAKASEC
26. Chief of Staff	Prince George's County Department of Social Services
27. Executive Director	Loudoun Free Clinic
28. Assistant Program Director	Fairfax County Community Health Care Network
29. Deputy Director	Safe Routes to School National Partnership
30. Executive Director of Outreach	ArtSpace Herndon
31. Principal	City Neighbors High School
32. President & CEO	Community Foundation for Loudoun and North Fauquier
33. Co-Director	Theatre Action Group
34. Program Manager	Alliance for a Healthier Generation
35. Director	Fairfax County Public Schools
36. Division Director	Family Services, Inc
37. Director	Real Food for Kids
38. Director	Resident Services, AHC Inc
39. Director	Health Care for the Homeless
40. Assistant Professor	University of Maryland Baltimore

41. Health Officer	Frederick County Health Department
42. Program Director	Family Services, Inc
43. Director	Baltimore City Schools
44. Administrator	First Baptist Church
45. Executive Director	Community Health and Empowerment through Education and Research
46. Executive Director	Access to Wholistic and Productive Living
47. CRNP Quality	Greater Baden Medical Services
48. Program Director	Meyer Foundation
49. Executive Director	Montgomery County Food Council
50. Chief Executive Officer	Virginia Association of Free and Charitable Clinics
51. Executive Director	Shepherd's Center of Oakton-Vienna
52. Executive Director	Culmore Clinic
53. Executive Director	Greater Prince William Community Health Center
54. Policy Analyst	Government of DC, Office of Planning and DC Food Policy Council
55. Director	Loudoun County Health Department
56. Senior Manager	Casa de Maryland
57. Executive Director	Thurman Brisben Homeless Shelter
58. President & CEO	Healthcare Initiative Foundation
59. Coordinator	Outward Bound Baltimore
60. Executive Director	Potomac Health Foundation
61. Executive Director	Maryland Family Network
62. Vice President	BITHGROUP Technologies
63. Executive Director	Northern Virginia Dental Clinic
64. Chief Medical Officer	Chase Brexton Health Care
65. Program Specialist	Edu-Futuro
66. Executive Director	Regional Primary Care Coalition
67. Director	Housing Initiative Partnership, Inc
68. Executive Director	Housing and Community Development, Bon Secours Health System
69. Director	George Mason University
70. Director	Wesley Housing Development Corporation
71. Manager	The Child and Family Network Centers
72. Executive Director & President	Arlington Free Clinic
73. Coordinator	Youth Advocate Programs
74. Supervisor	Prince William County
75. Director	DC Hunger Solutions
76. Executive Director	Consumer Health First
77. Director	Medical Care for Children Partnership Foundation
78. Executive Director	Crossroads Community Food Network
79. Program Supervisor	Northern Virginia Family Service
80. Senior Director	Johns Hopkins Medicine
81. Program Associate	Washington AIDS Partnership
82. Partner	Venture Philanthropy Partners

Economic security

Findings from the 2019 CHNA revealed that economic security – defined as education, income and employment status – is a critical health need in the Mid-Atlantic region. Social and economic conditions are strong predictors of health. Higher income families tend to have better health outcomes, be more educated and gainfully employed. Conversely, poor families are more likely to live in unsafe homes and neighborhoods, often with limited healthy food access, employment opportunities, and school options. Poverty is also associated with an increased risk for chronic disease, injury, mental health and premature death.

Overall, the Mid-Atlantic region has a lower unemployment rate and higher median income compared to the national benchmark. However, there are significant racial and ethnic disparities in income, poverty and education across the region.

Factors related to health

- **5.7%** of Baltimore City residents are unemployed compared to only **3.1%** in Howard County
- **37.2%** of Washington D.C. residents live in cost-burdened housing, compared to **30.5%** in Frederick County
- The median household income in Baltimore City is **$44,263** compared to **$113,800** for Howard County
- In the Mid-Atlantic region, **33.1%** of Hispanics are without a high school diploma compared to only **4.8%** of Whites

> "We have a chunk of our population that is missing out on getting a high school degree, so we are automatically setting them up to struggle because if you don't have the education, that is going to affect everything else in your life."
>
> *– Expert Interviewee*

Data snapshot

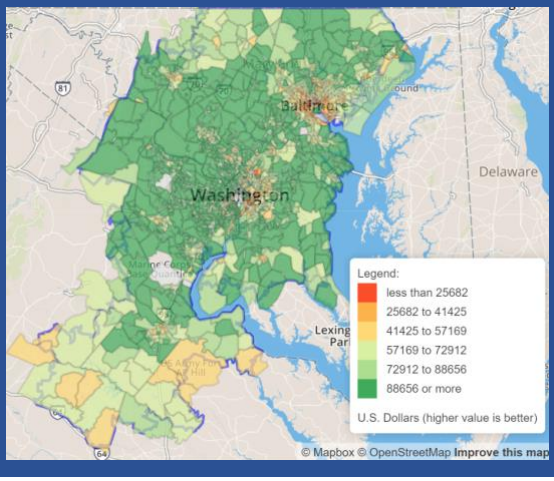
Economic security	National benchmark		BALT	DCSM	NOVA
Adults with no high school diploma	percent	**13.2**	9.8	10.4	8.7
Children below 100% FPL	percent	**21.5**	14.4	13.3	8.5
Children in single-parent households	percent	**33.8**	35.9	36.3	20.7
Cost burdened households	percent	**32.8**	32.9	35.8	30.4
Food insecurity	percent	**14.3**	13.0	11.7	6.8
Free and reduced price lunch	percent	**52.6**	46.0	49.4	30.7
Healthy food stores (low access)	percent	**22.4**	20.3	19.4	18.7
Housing problems	percent	**33.8**	32.6	36.1	30.4
Population below 100% FPL	percent	**15.4**	51.9	10.1	6.7
Preschool enrollment	percent	**47.6**	43.6	55.7	51.9
Reading proficiency	percent	**52.0**	0.5	36.8	80.3
Severe housing problems	percent	**18.5**	12.4	18.4	14.1
SNAP benefits	percent	**13.3**	26.4	10.0	4.9
Unemployment	percent	**4.0**	3.3	4.2	3.0
Uninsured children	percent	**11.6**	6.8	3.8	5.6
Uninsured population	percent	**11.6**	7.0	8.9	10.4

Compared to benchmark:	Z-score
Much worse	-2 to -3
Worse	-1 to -1.99
Slightly worse	-0.99 to -0.5
Average	-0.49 to 0.49
Slightly better	0.5 to 0.99
Better	1 to 1.99
Much better	2 to 3

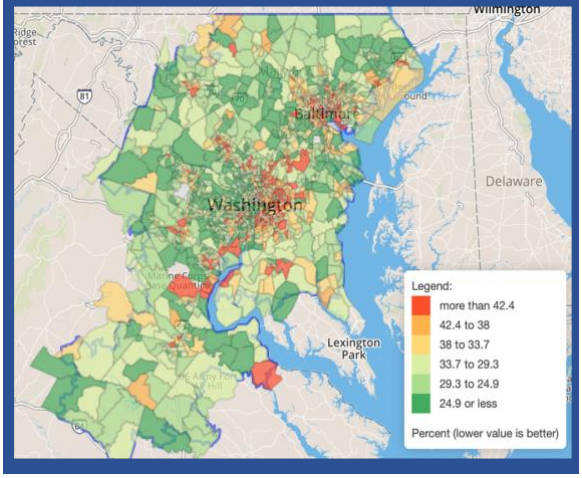
Health disparities in communities

At the county-level, Baltimore City, Prince George's County and Washington, D.C. face greater challenges related to economic security compared to the rest of the region. Children living in poverty, high school graduation rates, and cost-burdened housing (i.e. at least 30% of total household income) are a few indicators with the greatest variability between communities in the Mid-Atlantic region.

Median household Income



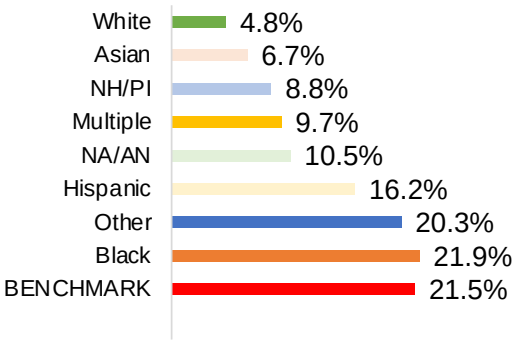
Cost-burdened housing



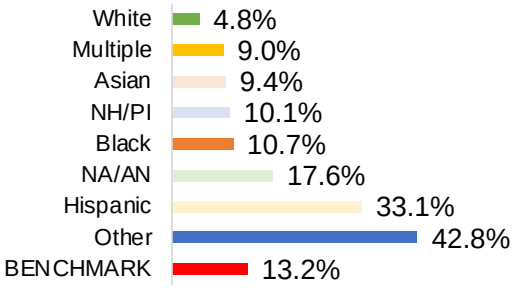
Health disparities among people

In the Mid-Atlantic States region, Black and Hispanic children are more likely to live below the 100% Federal Poverty Level (FPL) compared to their White counterparts. Proportionately fewer Hispanic adults have a high school diploma, and black children and adults are more likely to live in poverty.

Children below 100% Federal Poverty Level
(Percentage of children 0-17 living in households with incomes below the FDL)



Adults with no high school diploma
(Percentage of adults 25+ without a high school diploma or equivalent)



Access to care

Findings from the 2019 CHNA revealed that access to care – defined as the availability of health care services, providers, and coverage – is a critical need in the Mid-Atlantic region. Comprehensive access to care prevents disease, promotes health maintenance and reduces the risk of preventable illnesses and premature death. Factors which affect an individual's ability to receive medical care include insurance status, living in areas with a shortage of healthcare professionals and access to culturally competent healthcare providers.

Overall, the Mid-Atlantic region has a higher insurance rate and better access to providers compared to the national benchmark. However, there are significant racial, ethnic and geographic disparities in access to services, providers and health care coverage.

Factors related to health

- **26.4%** of Hispanics are uninsured compared to **4.3%** of Whites in the Mid-Atlantic region
- **12.9%** of the population in Prince George's County is uninsured compared to only **6.1%** in Frederick County
- **Stafford County** has a shortage of primary care, mental health and dental providers, and fewer Federally Qualified Health Centers compared to the national benchmark
- Multiple interview respondents cited transportation to health care facilities as a barrier to healthcare access

> "We are especially having difficulty with our immigrant population […] requesting or seeking health services. Whether they are in line for green card or citizenship and are worried that they may not be eligible because of current political climate or if they're undocumented, they're scared that they're going to be deported […]"
>
> *– Expert Interviewee*

Data snapshot

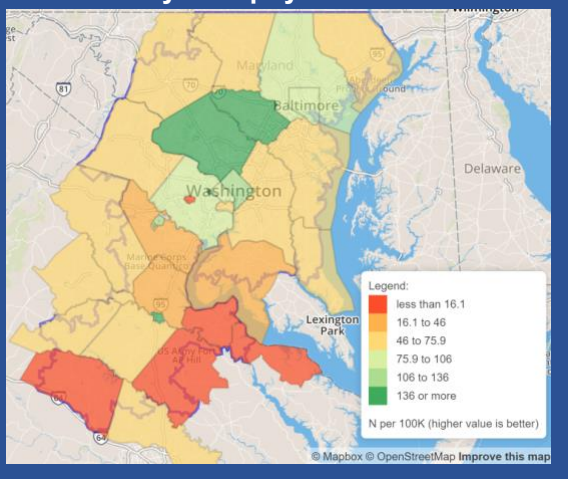
Access to care	National benchmark		BALT	DCSM	NOVA
Asthma Hospitalizations	rate	3.4	5.0	4.0	4.0
Breast Cancer Screening (Mammogram)	percent	63.1	64.3	61.8	60.5
Dentists	rate	65.6	68.9	92.3	74.4
Diabetes Management (Hemoglobin A1c Test)	percent	85.2	84.6	83.8	85.9
Federally Qualified Health Centers	rate	2.5	1.6	2.0	0.5
Mental Health Providers	rate	200.7	227.5	239.6	143.0
Poor or Fair Health	percent	16.1	13.8	12.0	11.8
Poor Physical Health Days	number	3.7	3.3	3.0	2.7
Preventable Hospital Events	rate	50.2	49.1	38.6	37.4
Primary Care Physicians	rate	75.9	97.8	95.8	78.2
Recent Primary Care Visit	percent	79.0	80.7	72.4	77.7
Uninsured Population	percent	11.6	6.8	8.9	10.4

Compared to benchmark:	Z-score
Much worse	-2 to -3
Worse	-1 to -1.99
Slightly worse	-0.99 to -0.5
Average	-0.49 to 0.49
Slightly better	0.5 to 0.99
Better	1 to 1.99
Much better	2 to 3

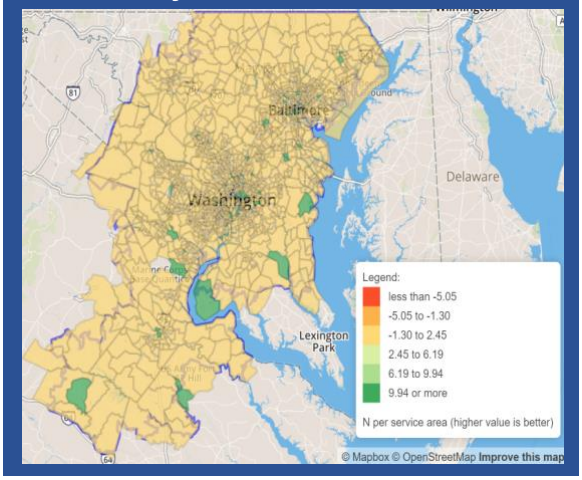
Health disparities in communities

At the county-level, Stafford, Prince William and Loudoun Counties have fewer mental health, primary care and dental providers compared to the rest of the region. Frederick, Fairfax, Stafford, Prince William, Loudoun and Baltimore Counties have fewer Federally Qualified Health Centers compared to the national benchmark.

Primary care physician access



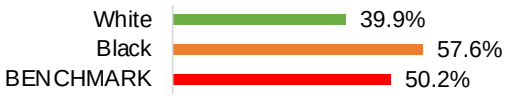
Federally Qualified Health Centers



Health disparities among people

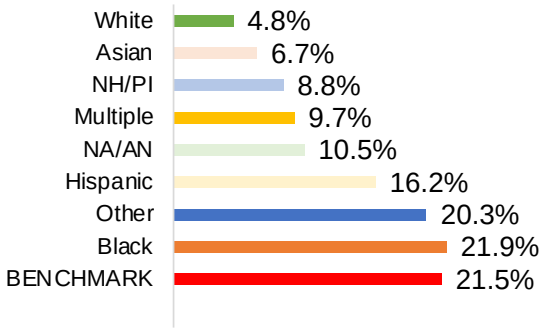
In the Mid-Atlantic region, Black, Hispanic and Native American/ Alaskan Native children are more likely to be uninsured compared to their White counterparts. Blacks are also more likely to experience a preventable hospital event compared to Whites.

Preventable hospital events
(Patient discharge rate for conditions that are ambulatory care sensitive)



Recent primary care visit
(Percentage of Medicare beneficiaries that visited a primary care clinician at least once within the past year)

Uninsured children
(Percentage of children below the age of 18 without health insurance coverage)



Obesity/ HEAL/ diabetes

Findings from the 2019 CHNA revealed that obesity, HEAL (Healthy Eating Active Living) and diabetes are critical health needs in the Mid-Atlantic region. Obesity has reached epidemic proportions in the United States, with one in three adults considered obese. Obesity is associated with cardiovascular disease, diabetes and certain types of cancer. Regular physical activity and healthy eating cut the risk for many chronic conditions and diabetes.

Overall, the Mid-Atlantic region sees lower rates of obesity and diabetes compared to the national benchmark. Yet, neighborhood disparities in food access and the accessibility of parks and/or recreational facilities compound obesity and diabetes, and are associated with poverty.

Factors related to health

- **23.8%** of Baltimore City residents experienced food insecurity in the past year (national benchmark: **14.3%).** To compare, **8.3%** of Anne Arundel's County residents experienced food insecurity in the past year.
- **33.0%** of Prince George's County residents are obese compared to **19.7%** of Montgomery County residents (national benchmark: **27.5%**)
- Residents in all 15 counties in Mid-Atlantic region - except for Baltimore City - have longer commutes to work (defined as 60 minutes each direction) compared to the national benchmark

> "If you don't have access to grocery store[s], or don't feel safe in [the] neighborhood you don't want to be outside walking or exercising. All affect [..] health decisions and are determinants of disease."
>
> *– Expert Interviewee*

Data snapshot

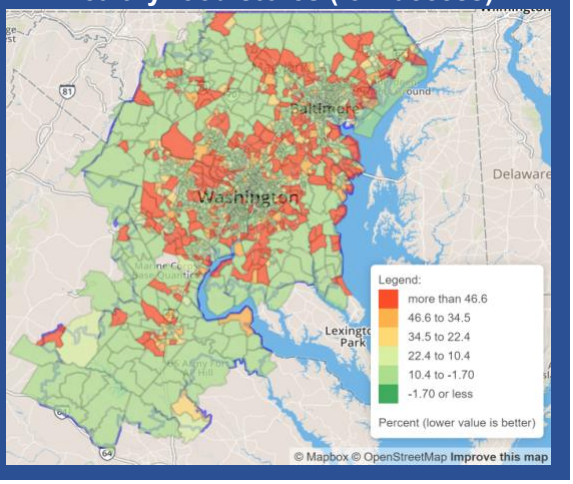
Obesity/ HEAL/ diabetes	National benchmark		BALT	DCSM	NOVA
Diabetes Management (Hemoglobin A1c Test)	percent	**85.2**	84.6	83.8	85.9
Diabetes Prevalence	percent	**10.0**	10.2	9.3	7.0
Exercise Opportunities	percent	**84.3**	96.1	97.9	92.8
Food Insecurity	percent	**14.3**	13.0	11.7	6.8
Free and Reduced Price Lunch	percent	**52.6**	46.0	49.4	30.7
Healthy Food Stores (Low Access)	percent	**22.4**	20.3	19.4	18.7
Heart Disease Deaths	rate	**101.5**	109.5	97.6	59.4
Heart Disease Hospitalizations	rate	**13.8**	11.5	9.0	8.2
Heart Disease Prevalence	percent	**26.5**	26.1	24.6	21.6
Obesity (Adult)	percent	**27.5**	28.7	25.8	22.3
Physical Inactivity (Adult)	percent	**21.7**	21.8	18.6	17.2
Public Transit Stops	percent	**14.5**	23.3	24.1	28.8
SNAP Benefits	percent	**13.3**	12.4	10.0	4.9
Stroke Deaths	rate	**37.3**	41.5	32.3	31.1
Stroke Hospitalizations	rate	**8.9**	10.1	8.6	8.6
Stroke Prevalence	percent	**4.0**	4.5	4.4	3.7
Walkable Destinations	percent	**22.4**	41.5	56.1	57.4

Compared to benchmark:	Z-score
Much worse	-2 to -3
Worse	-1 to -1.99
Slightly worse	-0.99 to -0.5
Average	-0.49 to 0.49
Slightly better	0.5 to 0.99
Better	1 to 1.99
Much better	2 to 3

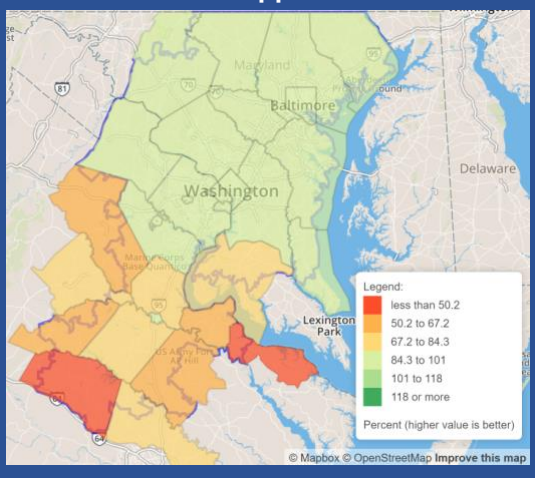
Health disparities in communities

As a region, the Mid-Atlantic has more parks and/or recreational facilities and better access to large grocery stores and supermarkets than the national average. However, at the county-level, Anne Arundel, Prince William and Stafford Counties have low access to healthy food stores, and Stafford County offers fewer parks/ recreational facilities than the rest of the region.

Healthy food stores (low access)



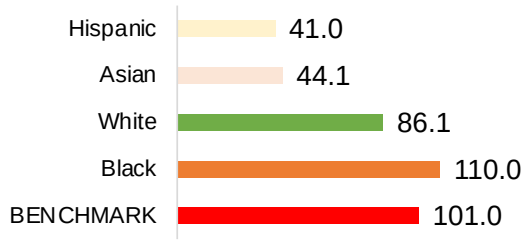
Exercise opportunities



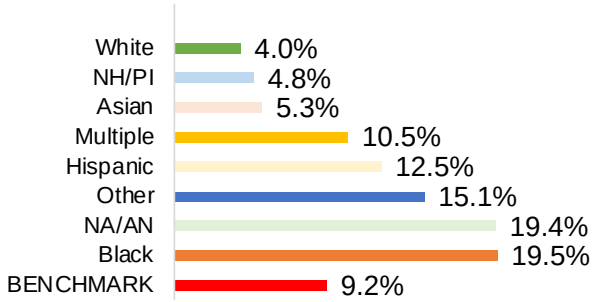
Health disparities among people

In the Mid-Atlantic region, Blacks and Hispanics are more likely to receive Supplemental Nutrition Assistance Program (SNAP) benefits compared to their White or Asian counterparts. Blacks also have higher rates of heart disease deaths, and poorer diabetes management (based on the A1c test) compared to White, Hispanic and Asian populations.

Heart disease deaths rate
(Age-adjusted rate of death due to coronary heart disease per 100,000 population)



SNAP benefits
(Percent of households receiving SNAP benefits)



Behavioral health

Findings from the 2019 CHNA revealed that behavioral health – including both mental health and substance use disorder – is a critical health need in the Mid-Atlantic region. In the U.S., one in five adults lives with mental illness. Throughout a person's lifespan, social, economic and physical conditions affect their mental health. Factors affecting mental health include education/employment options, living in safe neighborhoods and access to quality and affordable health care. Substance use disorder is associated with mental health, often occurring together. Substance use disorder is a risk factor for cardiovascular disease, lung disease, stroke, cancer, and communicable diseases.

Overall, the Mid-Atlantic region has fewer suicides and more mental health providers than the national benchmark. However, there are significant geographic disparities in access to mental health services, in particular in Northern Virginia.

Factors related to health

- Baltimore City has a suicide, alcohol or drug-related death rate of **56.7** per 100,000, trailing behind the average by **29.0%**
- The region has **1.7** beer, wine and liquor stores per 10,000 individuals, trailing the national average by **53.0%**
- **22.4%** of Arlington City residents self-report heavy alcohol consumption compared to **17.8%** for the nation
- **8.1%** opioid prescription drug claims were filled in Stafford County compared to **3.8%** in Alexandria City

> "The greatest need at this point in our community is mental health services. I think that [is] something that we worry about [when] doing assessments on folks because we have no place to send them in regard to both mental and behavioral health."
>
> *– Expert Interviewee*

Data snapshot

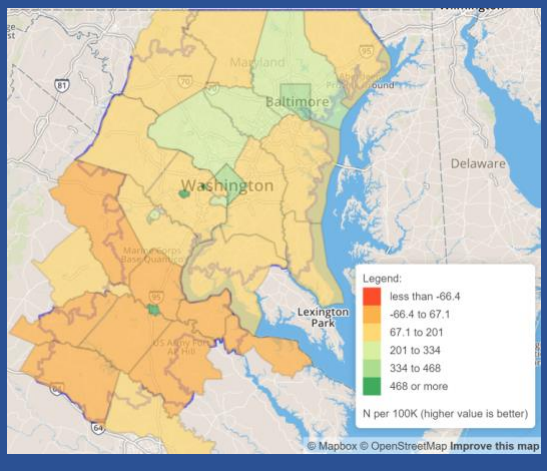
Behavioral health	National benchmark		BALT	DCSM	NOVA
Deaths by Suicide, Drug or Alcohol Misuse	rate	41.0	41.4	23.5	23.2
Depression Among Medicare Beneficiaries	percent	16.8	16.8	12.7	12.0
Mental Health Providers	rate	200.7	227.5	239.6	143.0
Social and Emotional Support (Insufficient)	percent	20.8	20.7	20.5	15.3
Social Associations	rate	10.3	9.3	14.6	11.0
Suicide Deaths	rate	12.8	10.1	7.0	9.7
Beer, Wine, and Liquor Stores	rate	1.1	2.4	2.0	0.6
Current Smokers	percent	15.7	15.3	12.2	12.5
Excessive Drinking	percent	17.8	16.4	17.3	17.9
Heart Disease Deaths	rate	101.5	109.5	97.6	59.4
Heart Disease Hospitalizations	rate	13.8	11.5	9.0	8.2
Heart Disease Prevalence	percent	26.5	26.1	24.6	21.6
Impaired Driving Deaths	percent	30.1	30.1	33.2	25.5
Low Birth Weight	percent	8.1	9.2	9.0	7.1
Opioid Prescription Drug Claims	percent	5.8	6.2	4.9	4.9
Poor Mental Health Days	number	3.7	3.4	3.1	2.8

Compared to benchmark:	Z-score
Much worse	-2 to -3
Worse	-1 to -1.99
Slightly worse	-0.99 to -0.5
Average	-0.49 to 0.49
Slightly better	0.5 to 0.99
Better	1 to 1.99
Much better	2 to 3

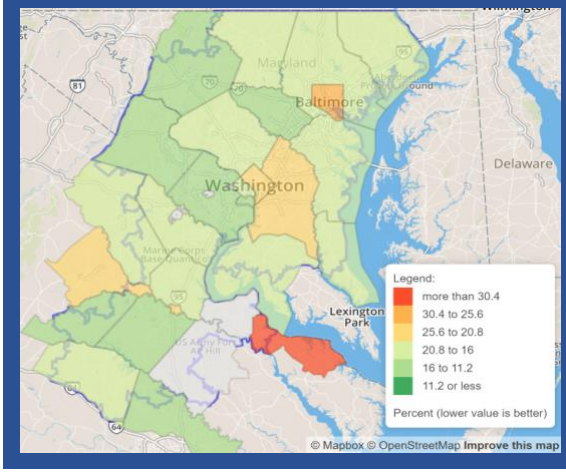
Health disparities in communities

Arlington, Stafford, Loudoun and Prince William counties have a shortage of mental health providers (e.g. psychiatrists, psychologists, clinical social workers, and counselors) compared to the national benchmark. Prince George's County and Baltimore City residents self-report having less social and emotional support compared to the national average.

Available mental health providers



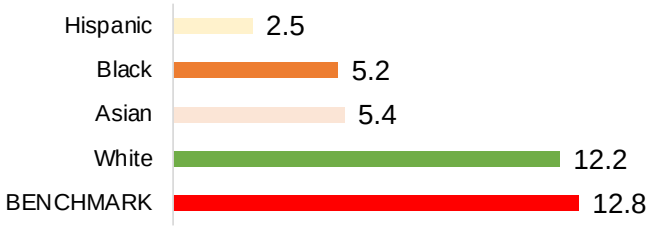
Social/ emotional support



Health disparities among people

Overall, the region has fewer suicide deaths compared to the national benchmark. However, Whites are two times more likely to commit suicide compared to their Black and Asian counterparts, and almost five times more likely to commit suicide compared to their Hispanic counterparts.

Suicide deaths
(Age-adjusted rate of death due to intentional self-harm per 100,000 population)



Appendix D. Selected Community resources

The community resources listed below were mentioned by the key informants. These organizations represent only a subset of available community resources available in the Mid-Atlantic region.

Economic Security Community Resources	
Resource provider name	**Summary description**
Bon Secours Community Works *Baltimore City, MD*	Bon Secours Community Works (BSCW) works to enrich West Baltimore communities with programs and services that contribute to the long-term economic and social viability of neighborhoods. Our Money Place Financial Services is a program at Community Works that offers services to help residents become more financially aware, begin building assets and create stronger financial futures for their families. https://bonsecours.com/baltimore/community-commitment/community-works
Early Childhood Innovation Network (ECIN) *Washington, D.C.*	The Department of Health in Washington, D.C. has initiated the ECIN collaborative with various partners to empower adult caregivers with knowledge and resources to improve health outcomes among children (from pregnancy to five years). https://www.ecin.org/
Promise Place *Prince George's County, MD*	Led by the Department of Social Services, Promise Place is an emergency shelter that is open 24 hours per day for homeless, abused and neglected youth. The shelter's goal is to ensure individuals seeking aid return to a stable living environment through counseling services and case management. http://www.sashabruce.org/programs/safehomes/promise-place/
The Bridge Center at Adam's House *Prince George's County, MD*	The Bridge Center at Adam's House aids veterans, ex-offenders and youth to reintegrate into the community. The aim of this center is to promote healthy outcomes and reduce the rate of individuals reentering jail. Services provided include: housing, food, medical, GED preparation and employment assistance. The program also provides military service benefit aid, legal assistance and behavioral health treatment. https://www.princegeorgescountymd.gov/2889/The-Bridge-Center-at-Adams-House
Safe Kids *Frederick County, MD*	Led by the Frederick County Health Department, Safe Kids is a program which provides resources for County residents aimed at keeping children safe. Resources include car-seat check-ups and safety workshops (to prevent childhood injuries). The program also promotes safe routes to school. https://www.safekids.org/coalition/safe-kids-frederick-county
Van Program *Anne Arundel County, MD*	Through the Van Program, Anne Arundel County provides free curb to curb transportation to residents 65 years of age or older and residents 18 years or older with a disability. The aim of this program is to provide a means to transport individuals to senior centers or medical appointments. https://www.aacounty.org/services-and-programs/transportation-for-elderlydisabled

Access to Care Community Resources	
Resource provider name	**Summary description**
Prenatal Enrichment Program *Baltimore County, MD*	This program provides public health nurses for high-risk pregnant women to manage their pregnancy through providing access to prenatal, educational and case management resources. The program follows eligible individuals from pregnancy until after delivery, focusing on the area of infant mortality. https://www.baltimorecountymd.gov/Agencies/health/healthservices/reproductivehealth.html
Breast and Cervical Cancer Program *Howard County, MD*	Through the Breast and Cervical Cancer Program (BCCP), Howard County provides free preventative cancer services to eligible women who are at least 40 years of age and are Maryland residents with a limited income. BCCP offers the following screenings at no cost to the participant: clinical breast exams, mammograms, and regular pap tests. If an abnormal result is identified, the program will cover follow up care with participating healthcare providers. https://www.howardcountymd.gov/Departments/Health/Cancer-Prevention/Breast-Cervical-Cancer-Program
Tuberculosis Program *Frederick County, MD*	Frederick County provides Tuberculosis (TB) screenings for at risk individuals and treatment options for those diagnosed with an active TB case or infection. This program is offered at no cost to the individual. https://health.frederickcountymd.gov/262/Tuberculosis
Care for Kids *Montgomery County, MD*	The Care for Kids program provides low income, uninsured children ages 17 years and younger access to healthcare services (e.g., primary care services, optometry, dental and limited specialty care services) within Montgomery County. https://www.montgomerycountymd.gov/HHS-Program/Program.aspx?id=PHS/PHSMedCareforUninsChildrenCareForKids-P1703.html
Maternity Partnership/Prenatal Care *Montgomery County, MD*	Through this program, low-income uninsured pregnant women are provided with prenatal care services, dental screening and prenatal classes to support a healthy pregnancy. https://www.montgomerycountymd.gov/HHS-Program/Program.aspx?id=PHS/PHSPrenatalCare-p283.html
Northern Virginia Dental Clinic *Fairfax and Loudoun Counties, VA*	In partnership with local governments and dental professionals, this non-profit 501(c)(3) organization provides low cost dental health services and education to promote dental hygiene among eligible participants. http://www.novadentalclinic.org/
HealthWorks *Loudon County, VA*	HealthWorks is a not-for-profit Federally Qualified Health Center that provides culturally competent medical, dental and behavioral healthcare services to individuals lacking health insurance or which are underinsured. http://hwnova.org/
Virginia Vaccines for Children (VVFC) *Virginia Department of Health*	The Virginia Department of Health ensures the provision of no cost pediatric vaccinations to eligible children. Shots are administered at program affiliated private or public facilities. http://www.vdh.virginia.gov/immunization/vvfc/

Obesity/HEAL/Diabetes Community Resources	
Resource provider name	**Summary description**
National Diabetes Prevention Program *Baltimore County, MD*	Baltimore County supports national efforts to prevent the onset of diabetes through the hosting of a variety of free County-wide resources to coach individuals with pre-diabetes and unhealthy living styles in how to manage blood their glucose levels. https://www.baltimorecountymd.gov/News/BaltimoreCountyNow/you-can-prevent-type-2-diabetes
Office of Aging and Independence Programs *Howard County, MD*	Through the Office of Aging and Independence (OAI) programs, Howard County offers a variety of group fitness resources to promote an active lifestyle among the County's geriatric population. https://www.howardcountymd.gov/Departments/Community-Resources-and-Services/Office-on-Aging-and-Independence
Journey to Better Health *Howard County, MD*	This program is a faith-based initiative carried out by community health workers, which train community congregation leaders to teach congregants how to identify, monitor and manage chronic diseases (e.g., diabetes). For more information, visit: https://www.hopkinsmedicine.org/howard_county_general_hospital/services/population_health/journey_to_better_health/index.html
Dine and Learn *Prince George's County, MD*	To prevent the onset of obesity and illness, Dine and Learn promotes healthy eating and active lifestyle choices. This free program is delivered through 2-hour sessions over an 11-month period where participants are taught healthy cooking and exercise routines. http://www.pgparks.com/859/Dine-Learn
On the Road Diabetes Classes *Prince George's County, MD*	Prince George's County has partnered with Doctors Community Hospital/The Joslin Diabetes Center to provide in-person diabetes learning sessions. Sessions are aimed at teaching individuals how to manage their diabetes. They provide a free blood sugar screening and promote healthy eating and regular exercise. https://www.princegeorgescountymd.gov/2098/On-the-Road-Diabetes-Class

Behavioral Health Community Resources	
Resource provider name	**Summary description**
Screening, Brief Intervention and Referral to Treatment Initiative *Baltimore County, MD*	In conjunction with the public-school system, the County has implemented Screening, Brief Intervention and Referral to Treatment (SBIRT) services in 14 school-based wellness centers. The program aids in the identification of at-risk patients in need of mental health/substance abuse assistance. http://www.marylandsbirt.org/
Harford Crisis Center *Harford County, MD*	The center provides behavioral health assistance 24 hours a day/7 day a week to anyone experiencing a mental health or substance abuse crisis regardless of health insurance status. https://www.healthyharford.org/mental-health/harford-crisis-center
Naloxone Training Program *Harford County, MD*	In response to the opiate/heroin epidemic, Harford County offers free Naloxone training to interested residents who are 18 years or older. The training equips individuals in how to recognize and respond to opioid overdose through the administration of Naloxone. At the conclusion of their training, attendees receive Naloxone kits at no cost. For more information, contact the Harford County Health Department at (410) 877-2340.
Peer Recovery Specialists *Harford County, MD*	Through Peer Recovery Specialists, individuals enrolled in the OP/IOP program in Harford County are provided with continuing care, support and educational opportunities to overcome addiction. The aim of the program is to provide a mentor with similar experiences to guide individuals to recovery. For more information, contact Harford County at (410) 877-2340 (ask for Peer Support)
Affiliated Santé Group *Prince George's County, MD*	Prince George's County has partnered with the Affiliated Santé Group to provide outpatient mental health and substance abuse services to eligible patients. Services provided include: outpatient mental health clinic, psychiatric rehabilitation program, supported employment, crisis response services and substance abuse interventions. http://www.pgchealthzone.org/resourcelibrary/index/view?id=135876093167834353
Teen Diversion Program *Harford County, MD*	The program offers eligible adolescents within the County a minimum of twelve-weeks in outpatient psychiatric rehabilitation treatment. The aim of the program is to encourage reintegration into the community through educational placement. Eligible teens are not denied service based on insurance status, a sliding scale is used to determine costs. https://harfordcountyhealth.com/harford-county-health-department-services/services-for-teens/teen-diversion/