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Assessing Health and Human Services Needs to Support an Integrated *Health in All Policies* Plan for Prince George's County, Maryland

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Preface

Prince George's County is at a critical crossroads with respect to its future health and well-being. Over the past decade, the County has seen a demographic shift (e.g., growing populations of seniors and immigrants) and tremendous changes in the health care landscape through hospital mergers and acquisitions. During this time, the Prince George's County Council has pursued an active approach to health promotion, including considering legislation to promote healthy behaviors. Currently, there are widespread discussions regarding the social determinants of health and recognition of the multiple sectors and factors influencing health. Thus, Prince George's County is now poised to pursue new approaches to promoting and budgeting for a more holistic approach to health and well-being.

To gain a clearer understanding of the current and future health and human services needs among residents, the level of unmet need, and the resources being allocated to health, the Prince George's County Council, acting as the County Board of Health, contracted with the RAND Corporation in 2019 to complete a health and human services needs assessment in its pursuit of a *Health in All Policies* approach to policymaking. This assessment builds on the 2009 RAND assessment and other County reports to more deeply examine the drivers of health influencing health outcomes. The findings are based on original analyses of primary and secondary data, as well as synthesis of existing studies, proposed operating budgets, and promising practices from other relevant communities and regions across the country. This report should be of interest to County policymakers, stakeholders, and residents, as well as those who have a general interest in a *Health in All Policies* approach to population health and well-being.

This research was sponsored by the Prince George's County Council, acting as the County Board of Health, and conducted within RAND Social and Economic Well-Being. Ashley Kranz and Anita Chandra led this research study. Questions about the report can be directed to akranz@rand.org and chandra@rand.org. RAND Social and Economic Well-Being is a division of the RAND Corporation that seeks to actively improve the health and social and economic well-being of populations and communities throughout the world. This research was conducted in the Community Health and Environmental Policy Program within RAND Social and Economic Well-Being. The program focuses on such topics as infrastructure, science and technology, community design, community health promotion, migration and population dynamics, transportation, energy, and climate and the environment, as well as other policy concerns that are influenced by the natural and built environments, technology, and community organizations and institutions that affect well-being. For more information, email chep@rand.org.

This report was updated in August 2021 to correct minor errors and omissions.

Abstract

With evolving demographics and a changing health care landscape, the Prince George's County Council, acting as the County Board of Health, is considering its future policy approaches and resource allocations related to health and well-being.

To inform this path forward, this assessment builds on a RAND 2009 assessment and other County health reports to use primary and secondary data to describe both the health needs of County residents *and* drivers of health within the County, inclusive of the social, economic, built, natural, and health service environments. This report uniquely integrates these findings, analysis of budget documents, and review of promising practices from other communities, to situate recommendations in a *Health in All Policies* framework to foster aligned and integrated planning and budgeting across the County to promote health and well-being.

There is a shared interest of leaders and residents to embrace a holistic strategy for health and well-being in the County. Health services (inclusive of clinical care and health programs) are provided across many sectors in the County including human services, criminal justice, and schools. Yet, drivers of health largely exist outside of health care alone. While most adults in the County reported having good to excellent health, there are persistent challenges related to behavioral health, obesity, and cancer. Additionally, the drivers of health situated in the built, natural, and social environments, are unevenly distributed throughout the County and contribute to health equity challenges. Findings suggest two problems: (1) inefficient uses of the health care system, highlighting a need to rebalance investments in health care use and drivers of health, and (2) challenges in navigating health and human services and inequities in drivers of health across communities, signaling broader concerns related to residents' access to health and human services that influence health and well-being outcomes.

There are several paths forward for Prince George's County to pursue a more integrated policy approach to influence health and well-being outcomes. Recommendations are offered related to (1) creating a *Health in All Policies* system, (2) aligning investments, and (3) implementing new measurement and data systems.

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Note to Readers

As of June 2020, more than 7 million cases and 400,000 deaths due to the Coronavirus Disease-2019 (COVID-19) have been confirmed globally (Johns Hopkins University, 2020). In the United States (US), the pandemic has led to more than 110,000 deaths, mass shut-downs, and significant economic consequences (Johns Hopkins University, 2020). COVID-19 has disproportionately affected people of color and racial and ethnic minorities, in terms of cases, deaths, and economic upheaval (NYC Health, 2020; Parker, Horowitz, & Brown, 2020). Prince George’s County, which is predominantly composed of Black residents, accounts for more than one-in-four COVID-19 cases in Maryland (Maryland Department of Health, 2020). As of this writing, the County has reported the highest rate of COVID-19 cases (The New York Times, 2020) and the highest number of unemployment claims across all counties in Maryland (Fulginiti & Melser, 2020). The significant impacts of COVID-19 on Black and Hispanic residents has not simply been a result of the pandemic, but due to years of cumulative stress, trauma, lack of access to services and resources and ultimately, systemic racism. This context has been further amplified with other experiences of brutality and marginalization, most recently in the death of George Floyd at the hands of Minneapolis police in May 2020. The interconnection of the pandemic and police brutality has sharpened a national conversation about systems and policies, including how communities fund public safety, education, and health.

This report describes key findings from data collection and analyses conducted during the summer and fall of 2019 for a health and human services needs assessment conducted for Prince George’s County, Maryland. The motivation of the report was to articulate a new path for the County in implementing a *Health in All Policies* approach to policymaking. While the timing of report-writing preceded the COVID-19 pandemic and the increased global attention to the Black Lives Matter movement and systemic racism, the report’s framework, data, and recommendations are even more resonant in light of recent events. Current calls for reallocation of policing resources, new examinations of the cumulative impacts of racism on health, and general awareness of how history and institutions affect the well-being of communities further underscore the value of a holistic approach to health and well-being. This report provides an important and timely framework to aid policy makers and other stakeholders in their efforts to dismantle systemic barriers and address the upstream drivers of health.

Executive Summary

Overview

Prince George's County is at a critical crossroads with respect to its future health and well-being. Over the past decade, the demographics of the County have been evolving with a steadily growing number of seniors, Hispanic, and foreign-born residents. Additionally, the County's health care landscape has changed through hospital mergers and acquisitions and will continue to evolve with the expected 2021 opening of the University of Maryland Capital Region Medical Center. During this time, the Prince George's County Council has pursued an active approach to health promotion, convening health care providers in the community and considering legislation to promote healthy behaviors. Along with these developments in the County, broader societal changes are happening including national discussions regarding the increasing burden of chronic diseases, rising health care expenditures, and growing attention to the role of social determinants of health (SDOH). In this context, Prince George's County is poised to consider and pursue new approaches to promoting and budgeting for health.

This health and human services needs assessment is intended to assist the Prince George's County Council, acting as the County Board of Health, in their pursuit of *Health in All Policies*, an approach that aligns county funding, across departments and services, with needs and desired health outcomes. To inform these decisions, there is strong recognition of the need to not only understand the health needs of residents captured in prior health assessments, but to combine that with a more holistic analysis of the historical and systemic factors that influence health and well-being over generations. The aims of this assessment are to

1. Describe the health of County residents
2. Describe drivers of health within the County, inclusive of the social, economic, built, natural, and health service environments
3. Offer recommendations to foster aligned and integrated planning and budgeting across the County to promote health and well-being.

This report adds to a rich foundation of analyses, in particular the 2019 Community Health Needs Assessment led by Prince George's County Health Department (Prince George's County Health Department, 2019b). We situate this report by highlighting the key features of this report that distinguish it from existing work (Figure E.1). Key contributions of this report include its holistic examination of drivers of health, broad assessment of health care providers, and recommendations to support future integrated health planning in the County.

By offering a deep dive into drivers of health (e.g., social, economic, natural, built, and health service environments) along with health and well-being, we seek to provide integrated information to inform the County’s pursuit of a *Health in All Policies* approach to policymaking. Our recommendations are particularly focused on policy actions that involve cross-government department strategies, associated data, and financial alignment. With these recommendations, we provide examples used in other jurisdictions to help the County understand how these approaches have been practically implemented in other settings.

Figure E.1.
Key Features of This Report

Provides broad review of health influences from the social, economic, built, and natural environments
Offers insight into role of schools and human services departments in promoting health
Utilizes health care discharge data from both Maryland and District of Columbia (DC), highlighting key role of care provision from providers in DC
Examines health care provision outside of traditional health care providers, including schools, fire/EMS and corrections
Situates recommendations via <i>Health in All Policies</i> , inclusive of budget alignment and legislative action levers
Establishes a foundation for future integrated health planning for the County

This report is organized around a framework that can be used by the County to implement *Health in All Policies*, which is defined as a “collaborative approach that integrates and articulates health considerations into policymaking across sectors to improve the health of all communities and people” (Centers for Disease Control and Prevention, 2016). The framework emphasizes the interconnectedness of health and well-being, systemic factors that influence health over generations, drivers of health, and health systems (Figure E.2), and illustrates how health and well-being cannot be considered independently from historical and systemic inequities and drivers of health that shape opportunities and environments. As articulated in this framework, *health and well-being* are downstream outcomes and are described by quality of life, physical, mental and behavioral health, healthy behaviors, and community engagement (given links between *connection to community* and *health outcomes*) (Nelson, Sloan, & Chandra, 2019). While health and well-being are influenced by genetic composition, health and well-being are largely affected by upstream factors and drivers in the broader environment.

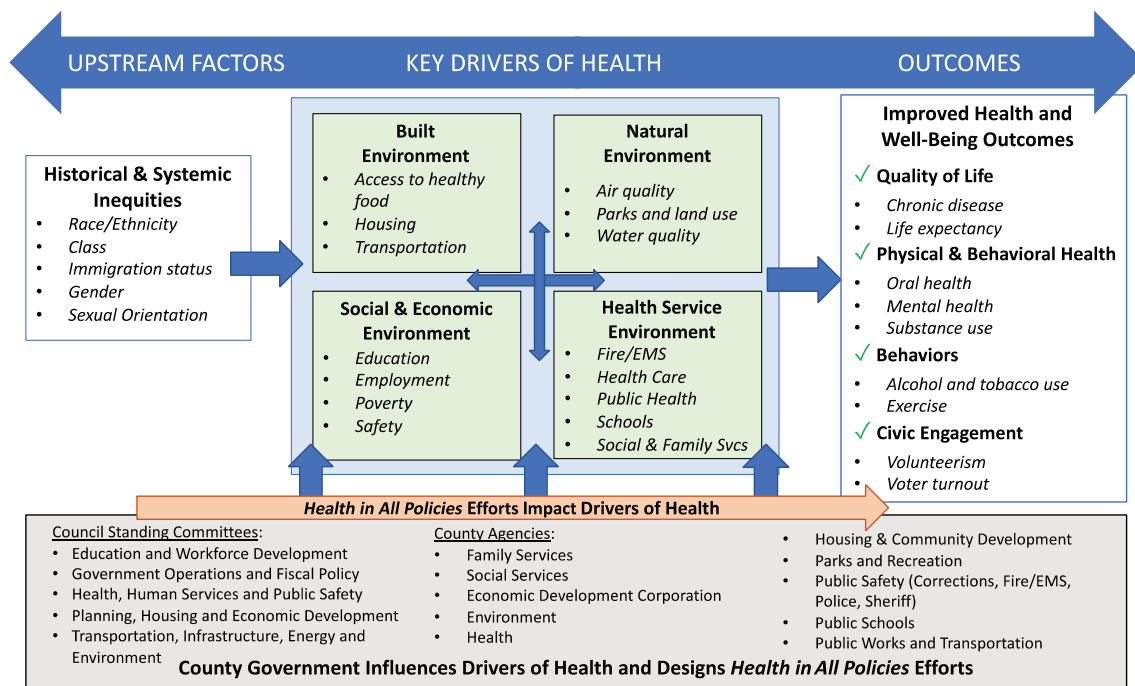
Approach

To describe the health and human services needs of County residents, we relied on both primary and secondary data. Primary data collection involved obtaining input via a Town Hall meeting; online survey of residents conducted after the Town Hall meeting; three focus groups composed of adult residents; one focus group composed of adolescents and young adults; and 23 interviews with individuals from organizations knowledgeable about the health and human services needs of County residents. The study team combined notes from all sessions, reviewed notes, and categorized key themes from the work.

In addition, county and sub-county secondary data were collected from a variety of public and proprietary sources to describe the current and historical health and human services needs of County residents. Data were obtained from numerous county agencies (e.g., Departments of Health, Corrections, Family Services, Social Services), public sources (e.g., American Community Survey, Behavioral Risk Factor Surveillance Survey), and proprietary sources (e.g., Maryland Healthcare Services Cost Review Commission and the District of Columbia Hospital Association). Together, these data describe drivers of health impacting County residents, the health systems serving County residents, and the health and well-being of County residents.

Finally, to inform our recommendations, we reviewed Prince George’s County’s operating budgets from fiscal year (FY) 2007 to 2019 and proposed operating budget from FY2020 determine where funding was allocated across county departments. We also reviewed promising practices from other communities and regions in the United States, highlighting those with similar challenges that Prince George’s County faces with respect to integration of health and human services, such as data systems, financing, and related policy interventions.

Figure E.2.
Improving Health and Well-Being Through an Integrated *Health in All Policies* Approach



NOTES: Bulleted items in italics are examples only. Our framework was informed by the Bay Area Regional Health Inequities Initiative’s Public Health Framework for Reducing Health Inequities (Bay Area Regional Health Inequities Initiative, 2019), and modified specifically for Prince George’s County.

Key Findings

In the text below and in Figure E.3, we summarize key findings related to the health and well-being and the drivers of health impacting health and well-being of County residents.

Health and Well-Being

We observed positive findings and improvements in the health and well-being of Prince George’s County residents for numerous indicators. The County has a lower rate of years of potential life lost, a measure of premature death, than the state average, and most adults in the County (83.9 percent) described their health as “good,” “very good,” or “excellent.” Positive metrics of well-being include a 17.8 percentage point increase in voter turnout in 2018 compared to the last non-presidential general election and stakeholders expressing a high interest in volunteer opportunities.

Figure E.3.
Key Findings from This Assessment

KEY FINDINGS

Inefficient uses of the health care system remain despite improvements.

- One in four emergency calls for medical services were for non-urgent needs.
- EDs continue to be used for preventable issues, such as asthma and dental care.

Highlights need to rebalance investments in health care use and drivers of health.

Residents encounter challenges in navigating health and human services.

- There is a lack of health insurance for some groups, including noncitizen immigrants, and insufficient funding to support the needs of these groups.
- Transportation barriers hinder residents obtaining health and human services.
- Residents are often unaware of available services and resources or may not know how to access or navigate known services and resources.
- Shortages of primary care providers, behavioral health providers, and dentists impact access, as does the cultural competency of providers.

Offers insight into why some residents may use costly and inefficient emergency services when primary care is a better option.

Spending on health and human services is low.

- Estimated County spending on health and human services departments is \$39 per person, about one-third to one-seventh the per-person spending of surrounding Maryland counties.

Inefficient health-services use is suggestive of reduced access to health and human services, which can contribute to inequities in health and well-being.

Systemic inequities in drivers of health place some communities farther behind in building healthy futures.

- Districts are differentially impacted by drivers of health and thus encounter different health challenges.
 - o District 2 has high rates of uninsurance and is predominantly Hispanic, a population with a teen birth rate more than double the County rate.
 - o District 3 has the highest poverty rate and numerous community “hot spots” of low-income individuals with poor access to healthy food.
 - o District 7 is predominantly Black, has low health literacy and the highest ED visit rates for adults and children in the County.

We also identified opportunities for improvement. As has been highlighted in the prior health assessments of Prince George’s County, Prince George’s County has high rates of incidence and mortality for select cancers. These data reflect stakeholder concerns about **men’s health**, as prostate cancer incidence and mortality rates are considerably higher in Prince George’s County than rates observed across Maryland or the United States. Additionally, stakeholders emphasized the need for resources and education to **promote healthy behaviors** like exercise and healthy eating. This is essential to address the **high rates of obesity** among county residents, which is concerning because it increases the risk of worse health, including poor birth outcomes, cancer, and cardiovascular disease. Stakeholders also expressed concerns about the **mental and behavioral health of children** and adolescents in the County. In analysis of secondary data, we observed high rates of bullying and suicidality among middle school students, with almost one in four reporting bullying at school and almost one in four reporting seriously thinking about attempting suicide. Finally, there are widespread concerns about **inequity in health and well-being**. High rates of many chronic diseases and unhealthy behaviors were more likely to be reported by among racial/ethnic minorities. Additionally, birth outcomes, including low birthweight and mortality, were significantly higher among Black infants than White infants.

Drivers of Health

Health Service Environment

The health care delivery system in Prince George’s County includes more than just hospitals and other traditional medical providers. Collaboration across multiple agencies is a growing and important part of health care delivery in Prince George’s County. In examining health care services offered to County residents, we find challenges related to access to care and system confusion indicated by use of emergency services for non-urgent needs. Stakeholders expressed concern about **access to care**, frequently related to access to primary care and mental and behavioral health services. The primary care needs of the County are well-documented and nearly all districts have some communities designated as shortage areas. It is possible that lack of access to primary care may be driving some of the racial/ethnic inequities observed in utilization of the ED for potentially preventable conditions. For example, rates of asthma-related ED visits and inpatient hospitalizations were more than four times higher for Black and Hispanic children compared to White children. Although few communities in the County are designated as mental health shortage areas, stakeholders mentioned challenges in **accessing mental and behavioral health services** for children and adolescents, individuals with severe mental illness, and reentering populations. County rates of adult ED visits for mental and behavioral health conditions were more than double that of visits for heart disease and nearly four times greater than the rates of visits for diabetes. Additionally, there is **system confusion** as evidenced by use of inappropriate health care systems. One example of this is the amount of calls for non-urgent medical services received by EMS. The majority of 911 calls for EMS (80.3 percent) resulted in the provision of medical services, and about one in four of these calls were considered to be for non-urgent medical services. Because EMS agencies provide an entry way into EDs, these are also a key entity of the health care system for helping to reduce the number of ED visits that are treatable outside EDs.

Social and Economic Environments

The County has experienced some positive trends when it comes to the social and economic environments, but still faces higher rates of poor social and economic drivers that influence health than neighboring counties. The percentage of residents who are **unemployed** or “**working poor**” has declined since 2014 yet remains higher than that seen in neighboring counties. Stakeholders noted that County residents, who face underemployment, may experience negative impacts to their physical and mental health due to psychological stress and difficult trade-offs that are needed to seek out care when it competes with employment schedules or because of lack of insurance. Although the County offers services to promote employment, stakeholders noted that many residents are unaware of these programs. This relates to broader comments we heard regarding **unmet need for social services**, but quantifying unmet need is challenging because individuals in need may not interact with the County and therefore may be uncaptured. Improvements were observed for school and **public safety**, with fewer high school students reporting sexual dating violence and a lower violent crime rate. However, self-reported data from middle school students suggests safety concerns, as one in four County middle school students reported carrying a weapon to school and two in three County middle school students reported having been in a physical fight.

Built and Natural Environments

Features of the built and natural environments either increase health risk or serve to motivate health-promoting behaviors, and thus, may contribute to any health disparities that exist across the County. In the United States, spatial patterning of built and natural environment features have been influenced by historical patterns of discriminatory practices, and thus, this context is important when thinking about upstream drivers of health inequities in the County. In particular, households in District 2, where more than half of residents are Hispanic, experience more **overcrowding** than elsewhere in the County and housing structures in Districts 2, 3, and 5 have a higher potential for exposure to lead than other districts in the County, due to the age of these structures. Although the proportion of children in the County with concerning **blood lead** levels is low, a notable trend is that it appears to be on the rise over the last five to six years. Additionally, residents expressed concern about **access to healthy food** and **physical activity opportunities** and quantitative data support this concern. The density of fitness and recreation centers in the county is lower than the state of Maryland, on average, and “food deserts” exist throughout the county. Mixed-use neighborhoods with dense street connections can promote active transport and serve as a means of increasing access to physical activity opportunities. The majority of highly walkable neighborhoods in the county exist in Districts 2, 3, 5, and 7. Although, it should be noted that even within these districts, there exist pockets of “food deserts” and low walkability.

Exploring Prince George's County Budget for Health

Tracking the alignment of dollars across departments that contribute to health is a key first step in being able to understand the true accounting of *health return on investment*. Prince George's County's health and human services departments are majority grant-funded and, relative to Howard, Montgomery, Anne Arundel, and Baltimore Counties in Maryland, have the lowest general fund-approved health spending, as of FY2018, even after adjusting for population size. A broad array of departments within the executive branch of the County government contribute to residents' health and health care utilization. Thus, budget allocations outside the health and human services departments are also influencing health outcomes, such as emer-

gency medical services from the Fire/EMS Department, health care offered by Department of Corrections, public safety supported by the Police Department, and environmental efforts from the Department of the Environment. This preliminary budget review can be enhanced by a comprehensive review of spending on health and drivers of health across departments, which requires detailed budget information to understand when and where funds are having an impact on health. Moving forward, this detail can come from a second level of coding, which includes extensive review of the time spent by government staff as well as health-related objectives and outcomes of programs and other services.

Recommendations

The findings from this assessment offer many paths forward for Prince George's County, particularly as the County pursues a more integrated approach to influencing health and well-being outcomes. Building a *Health in All Policies* system does not happen in one step, but rather through many strategies and phases. In order to make progress, however, it is useful to consider a few first steps. Figure E.4 presents initial steps to consider. Allocating funding to support these efforts is important to ensure staff time and resources are available to pursue this work.

Figure E.4.
Getting Started with *Health in All Policies*

√	<p>County Council acting as the Board of Health</p> <ul style="list-style-type: none"> ○ Require a more detailed County inventory (government and ideally, nongovernment) of the places and programs in which health services (e.g., health education, health promotion, clinical services) are being provided and who is receiving these services (in order to measure and reduce inequities). ○ Align information about what is being spent on these health services and information on reach, effectiveness, and impact overall on reducing inequities. ○ Require all nongovernmental organizations receiving County funding to identify their role(s) in promoting health and well-being and reducing inequities.
√	<p>County Departments within the Executive Branch</p> <ul style="list-style-type: none"> ○ Centralize data on drivers of health with information on health services and health outcomes, including requiring common reporting on drivers by each County agency. ○ Update the County website to coordinate information on what influences health across sectors. Offer resources organized by the health drivers to better support populations with health issues in more integrated ways ("one stop").

Below, we provide a high-level overview of the recommendations for implementing a comprehensive *Health in All Policies* approach and include examples of how other communities have implemented similar approaches. Full details about these approaches are provided in the final chapter of this report. We organize findings into three categories: (1) creating a *Health in All Policies* system, (2) aligning investments, and (3) implementing new measurement and data systems. *We use the acronyms LB and EB to help delineate primary roles for the County Board of Health (LB) versus activities of the Office of the County Executive (EB).*

1. Create a Health in All Policies system

1.1 Develop a coordinated *Health in All Policies* system that creates guidelines for governance (LB)

A key issue noted in this assessment was the challenge of connecting and coordinating residents across departments that address health and human services needs. In order for *Health in All Policies* to most effectively work, there is often a structure that defines a shared set of health goals across departments, a clarity on how information is shared to achieve those goals, and accountability across departments on how health will be integrated into policy design and development. These governance guidelines can ensure a more coordinated approach to integrated planning for health and are fundamental when making decisions about health-resource allocations. Examples of successful integration from other communities that can inform the County's next steps include efforts in integrated governance and health promotion in San Diego (Live Well San Diego, 2014) and Seattle & King County in Washington state (King County, 2013).

1.2 Create a strategic plan for all health and human services departments (EB)

While Prince George's County has a robust Community Health Needs Assessment led by the County Health Department, there is no such comparable assessment from Social Services or Family Services. Developing a comparable assessment and strategic plan for those departments can be used to organize investments, data, and programmatic decisions across health and human services. Further, it is key for moving towards *Health in All Policies* to have actions that bring in departments beyond health and human services, such as Police, Corrections and Fire/EMS. Montgomery County, Maryland offers an example for integration, having merged four county departments (Social Services, Public Health, Family Resources and Addictions, and Victims and Mental Health Services) into a single department and unified electronic records to better allocate resources based on client need and capacity (Hencoski, Ahluwalia, Seling, & Buckland, 2017).

1.3 Implement policies that promote health equity, including design and economic environment decisions (LB)

Stakeholders highlighted concerns related to the design of the physical and built environments. Across these topics, stakeholders recommended policies around enhancing walkability and environmentally friendly communities; implementing health equity guidelines with new economic investment; and harnessing whole community approaches to place-based investment. Examples for community design come from the Vermont Department of Health, which produced a guide to help towns design health communities (Vermont Agency of Transportation, 2019). Examples of using equity lenses on community investment and policy decisions include Multnomah County, Oregon, which developed the Equity and Empowerment Lens, a tool to ensure policies, programs, and processes are equitable for all populations within the communities (Multnomah County Health Department, 2012). Finally, place-based investment is a popular strategy in Prince George's County and elsewhere. In 2016, Detroit launched a public-private partnership to promote neighborhood revitalization and improve walkability. This effort pools funds for park improvements, streetscape improvements, commercial corridor development, and affordable single-family home stabilization (Invest Detroit, 2019b).

1.4 Improve the delivery and coordination of health services, including better screening for social needs (EB)

There was general agreement across stakeholders and in our data that while there are efforts to coordinate some health services, there is a need to do more, including helping residents access services, particularly within underserved populations and for mental and behavioral health needs. Seattle & King County in Washington state offers an example for promoting coordination via data integration, in which they aggregate medical, mental and behavioral health, social service, and health assessment data to provide clinical decisionmakers with a holistic view of a patient's risk factors, health outcomes, and service utilization (Washington State Department of Health and Human Services, 2014). Expanded screening is essential, but should be accompanied by funding to support the delivery of needed services.

1.5 Improve the accessibility, clarity, and usability of health and human services promoting resources and related civic engagement opportunities among County residents (EB)

With only 52 percent of County residents having above-average health literacy, combined with stakeholders noting residents' confusion and lack of knowledge about County resources, the County has the opportunity to strengthen its outreach and communication efforts. In considering how to address these issues, the County can learn from efforts intended to improve health literacy. For example, the Horowitz Center for Health Literacy at the University of Maryland School of Public Health is developing a framework for "community health literacy," which emphasizes the variety of sources of and channels for information and communication and the interconnectedness of people and organizations (Horowitz Center for Health Literacy, 2019a). Beyond health literacy, local governments are increasingly using multiple channels of communication (e.g., text messaging, online apps, and social media) to improve residents' knowledge of and use of services. Using a variety of communication channels is essential for ensuring messages reach the correct populations. For example, communicating volunteer opportunities to seniors necessitates a different communication strategy than communicating about service availability to young adults.

2. Align Investments

2.1 Break down silos between funding streams for health and human services, particularly in ways that can better leverage and coordinate grant funding (LB)

Prince George's County's health and human services departments are majority grant-funded, and Prince George's County has the lowest general fund approved health spending, as of FY2018, relative to Howard, Montgomery, Anne Arundel, and Baltimore Counties in Maryland. Trying to fund initiatives that encourage innovation or advance a *Health in All Policies* approach may be difficult with some grant restrictions. Moreover, grants are time-limited and the efforts they supported may cease when the grant ends if they are not supported by other funding streams. To break down funding silos, other communities have blended external grants and donations into a single fund to provide long-term and flexible support, blended finances for select populations across agencies (e.g., Virginia pools funds for services for at-risk youth), created a well-being trust, and levied taxes to support funding for select populations (e.g., Florida counties can levy taxes to support children's services) (Stafford County, 2019; Trust for America's Health, 2018).

2.2 Engage the nontraditional health sector to participate in “health mapping” and analysis (LB and EB)

To move toward a full *Health in All Policies* approach that links sectors and data systems that inform and influence health and well-being outcomes, sectors beyond the Health Department should be engaged. One approach to this is organizing budgets using a common health framework. For example, “health mapping” is an approach that can include coding all agency or department budgets for those programs that influence health outcomes or have health as part of an objective or mission, in order to capture a true accounting of health spending. This approach has been used for federal coding of *Health in All Policies* and can be used at the County level. In Appendix D, we offer a four-step process with templates that could be used to support pursuing an integrated *Health in All Policies* approach to global health budgeting. Another approach used in Massachusetts mandates that health impact assessments be conducted for every transportation project, thus engaging agency officials from transportation, health and human services, energy and environment, and public health (Massachusetts Department of Transportation, 2011).

Additionally, Vermont created a workgroup that conducted a series of health impact assessments, focused on midstream and upstream determinants and drivers of health, which were then used to develop policy recommendations (Vermont Department of Health, 2018a).

2.3 Better coordinate the nongovernmental organizations that address health and human service needs in the County and employ high-capacity nonprofits strategically (EB and LB)

There are a large number of nongovernmental organizations operating throughout the County and helping to address residents' health and well-being. Stakeholders emphasized the important role these organizations play and also expressed concern that many of these organizations are often too small to support ongoing and large scale efforts. To better utilize these community partners, the County can look to examples of multi-stakeholder strategic partnerships throughout the country.

3. Implement New Measurement and Data Systems

3.1 Identify data gaps and implement systems to address gaps (EB)

In analyzing quantitative data for this report, we encountered two main challenges. First, there were limitations in the granularity of data at the sub-County level. Data analysis only at the County-level will mask the experiences of some residents. Second, there were limitations in information that offer insight about broader health and well-being; thus, there remains a need for more detailed information about primary care access and use, prevalence of stress and behavioral health conditions, health literacy, and other indicators of well-being). A *single*, shared data system that allows joint or dual entry of information so that departments have a common operating picture of health needs may facilitate coordination of services and offer a clearer picture of the role of drivers of health in impacting the health and well-being of County residents. Examples of this include an effort in Massachusetts to implement a two-way electronic referral system where clinical providers can send referrals to community-based organizations for assistance with out-of-scope health needs (Commonwealth of Massachusetts Department of Public Health, 2015). The experience of Massachusetts may be relevant to the County as it develops a bidirectional referral system to connect clinicians and community-based organizations with funding from the CDC.

3.2 Improve structures that support health and well-being data transparency and stewardship (LB)

Stakeholders noted that the County's existing performance monitoring systems are disproportionately focused on administrative outputs, as opposed to outcomes of health and well-being. Relatedly, stakeholders indicated that information on the overall health and well-being of County residents was often not publicly available or easily accessible. Enhanced performance monitoring systems have been implemented in other communities to better describe and publicize the health and well-being of residents. For example, Santa Monica, California reports traditional health outputs and outcomes in physical, social, and emotional health in addition to broader well-being measures of community cohesion, the quality of the natural and built environments, and economic opportunity (City of Santa Monica, 2020). Additionally, Allegheny County has an office dedicated to the measurement and the tracking of key indicators of population health and well-being. The Office of Data Analysis, Research and Evaluation (DARE) is a joint endeavor from the Allegheny County Health Department, the Allegheny County Jail, the City of Pittsburgh, the Pittsburgh Bureau of Police, and Pittsburgh Public Schools (Allegheny County Department of Human Services, 2019). Information is conveyed to the public through its website, which offers maps and interactive and customizable dashboards to illustrate drivers of health and health outcomes, covering a variety of topics related to mental and behavioral health, child health, crime and justice, and education.

Limitations

This assessment should be considered in the context of its limitations. Few datasets enabled concurrent examination of health and drivers of health at a granular level. Therefore, we were unable to fully characterize how health behaviors, access to care, and health outcomes vary within the County. This data gap highlights the need for data sources that enable measurement of key drivers of health and health outcomes in a way that allows examination at a subcounty level and among specific subpopulations. Relatedly, more detailed and granular data need to be collected to fully measure several key areas of interest, including: use of outpatient health care; child health; and well-being. In addition, the qualitative data are a sample and do not necessarily capture opinions from all relevant stakeholders. We attempted to obtain feedback from a diverse and representative set of stakeholders, however, the views expressed by participants in interviews, focus groups, and the town hall meeting may represent the views of more engaged residents and may not be representative of all County residents. Moreover, while the town hall meeting featured a Spanish translator and a sign language interpreter, interviews and focus groups were conducted in English. Additionally, some populations are notoriously hard-to-reach, including individuals experiencing homelessness and undocumented immigrants.

Conclusions and Next Steps

With evolving demographics and a changing health care landscape, the Prince George's County Council, acting as the County Board of Health, is considering its future policy approach and resource allocations related to health and well-being. One of the most significant bright spots of this assessment process is the shared interest of leaders and residents to embrace a more integrated and holistic strategy for promoting health and well-being and addressing inequities in the County. This shared interest provides an excellent foundation for implementing and sustaining a strategic plan that can be executed.

As summarized in the recommendations, Prince George's County has opportunities to create a more cohesive governance structure focused on *Health in All Policies* and a robust budgeting process that codes, categorizes, and aligns funding against a shared health framework. This approach can be enhanced by a centralized and integrated data system that enables measurement of access and use of services, disease management, and indicators of quality of life and well-being that track real progress towards a thriving County. Given the motivations for this work came through legislative branch, the County has opportunities to leverage this interest via traditional legislative tools, such as spending policies. Building on a review of these data and recommendations, the next steps for the County are to determine what is structurally and financially possible to implement and what actions will bolster the County's goal of reducing inequities and promoting overall health and well-being.

Acknowledgments

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Abbreviations

ACS	American Community Survey
ATSDR	Agency for Toxic Substances and Disease Registry
BLS	Bureau of Labor Statistics
BRFSS	Behavioral risk factor surveillance system
CBP3	Community-based public-private partnership
CDC	Centers for Disease Control and Prevention
CHNA	community health needs assessment
COPD	Chronic obstructive pulmonary disease
DFS	Department of Family Services
DSS	Department of Social Services
EB	Executive Branch
ED	Emergency department
EMS	Emergency medical services
EPA	Environmental Protection Agency
ERS	Economic Research Service of the U.S. Department of Agriculture
FQHCs	Federally Qualified Health Centers
FTE	Full time equivalent
FY	fiscal year
HPSA	Health Professional Shortage Area
HRSA	Health Resources & Services Administration
HUD	U.S. Department of Housing and Urban Development
LAUS	Bureau of Labor Statistics Local Area Unemployment Statistics

LB	Legislative Branch
MCHP	Maryland Children's Health Program
MDs	Medical Doctors
M-NCPPC	Maryland-National Capital Park and Planning Commission
NP	Nurse Practitioner
PA	Physician assistant
PGCPS	Prince George's County Public Schools
PRAMS	Pregnancy Risk Assessment Monitoring System
RN	Registered Nurse
RWJF	Robert Wood Johnson Foundation
SDOH	Social determinants of health
SNAP	Supplemental Nutrition Assistance Program
SVI	Social Vulnerability Index
TNI	Transforming Neighborhoods Initiative
UMMS	University of Maryland Medical System
USDA	United States Department of Agriculture
YRBS/YTS	Maryland Youth Risk Behavior Survey and Youth Tobacco Survey
ZCTA	ZIP Code Tabulation Area

1. Introduction

Overview

Prince George's County is at a critical crossroads with respect to its future health and well-being. Over the past decade, the demographics of the County have been evolving with a steadily growing number of seniors, Hispanic, and foreign-born residents. Additionally, the County's health care landscape has changed through hospital mergers and acquisitions and will continue to evolve with the expected 2021 opening of the University of Maryland Capital Region Medical Center. During this time, the Prince George's County Council has pursued an active approach to health promotion, convening health care providers in the community and considering legislation to promote healthy behaviors. Along with these developments in the county, broader societal changes are happening. At a time when there are national discussions of topics such as the increasing burden of chronic diseases, rising health care expenditures, and increasing attention to the role of social determinants of health (SDOH), Prince George's County is poised to consider and pursue new approaches to promoting and budgeting for health.

With this context, the Prince George's County Council, acting as the County Board of Health, is considering its future policy approach and resource allocation for health in the County. To do so, there is strong recognition of the need to not only understand the health needs of residents captured in prior health assessments, but to combine that with a more holistic analysis of the environmental and service influences on health and well-being and to outline the relative roles of government departments within the executive branch, nonprofit organizations, and other service providers. In particular, there is a need to understand the full extent of the health issues in the County as well as where and how health is being influenced in order to inform recommendations for how the County proceeds with more aligned and integrated planning and budgeting for health. The term "integrated" is used to describe the removal of silos across departments and funding streams and to reflect a coordinated approach to health and well-being.

This health and human services needs assessment is intended to assist the Prince George's County Board of Health in its consideration of an integrated *Health in All Policies* approach, which is an approach that aligns county funding across departments and services, with needs and desired health outcomes. The aims of this work are to

1. Describe the health of County residents
2. Describe drivers of health within the County, inclusive of the social, economic, built, natural, and health service environments
3. Offer recommendations to foster aligned and integrated planning and budgeting across the County to promote health and well-being

As this report stems from interests of the County's legislative branch, we provide attention to potential policy actions that can focus on cross-government strategy, engaging both the legislative and executive branches of government, and associated policy and financial alignment. In the remaining parts of this chapter, we describe key findings and progress since the 2009 County-wide health needs assessment conducted by RAND, *Assessing Health and Health Care in Prince George's County* (Lurie et al., 2009). We then summarize the unique contributions of this report. We briefly offer a framework for how the County can organize its future integrated health planning, then outline the study methods used, and the roadmap for the rest of the report.

County Context Over the Last Decade

As noted earlier, the RAND Corporation, working with the Prince George's County Council, developed a report titled, *Assessing Health and Health Care in Prince George's County* in 2009. At the time, the County was facing challenges of fiscal constraints and demographic transitions, with net out-migration of White residents with higher incomes. The 2009 report principally emphasized issues of health care access and capacity given concerns at the time of the financial viability of Prince George's Hospital Center and the adequacy of the region's health care workforce. The report's findings led to recommendations to strengthen health care infrastructure in the County, including the primary care and the safety net.

Since the 2009 report, there have been changes to the County health care delivery landscape and even greater engagement from the Board of Health in promoting health. As has been the trend across the United States, the hospital mergers and acquisitions have changed the County's health care landscape (National Institute for Health Care Management Foundation, 2020). In 2019, Anne Arundel Medical Center and Doctors Community Health System merged to create Luminis Health and Adventist HealthCare acquired Fort Washington Medical Center. Additionally, following years of effort to transfer Prince George's County hospital system from County ownership and address its struggling financial situation, the University of Maryland Medical System took ownership of the system in 2017. This merger led to the construction of a new hospital, to replace Prince George's Hospital Center in Cheverly, Maryland. The new hospital, called the University of Maryland Capital Region Medical Center, is being built in Largo, Maryland and expected to open in 2021. Moreover, the health care delivery landscape was affected by changes at the state-level, including the introduction of the Maryland All-Payer Model in 2014, which introduced a new all-payer, annual global budget payment structure for hospitals throughout the state. Evaluations of the model found reduced hospital admissions, potentially avoidable hospitalizations, and total expenditures (Centers for Medicare & Medicaid Services, 2019). CMS approved the extension of the model through 2023 and the expansion of it to include additional parts of the health care system (e.g., mental health, long-term care, primary care).

As the health care delivery landscape has evolved, the Prince George's County Council has pursued an active approach to health promotion. This includes serving as a convener of health care providers in the community, providing oversight of hospital mergers, and monitoring access to health care services. Additionally, several pieces of legislation have been proposed to promote healthy eating, some of which have passed, including offering healthy options in vending machines (proposed in 2016, proposed and passed in 2017), adding warning labels to beverages with added sugar (proposed in 2017), and requiring nutritional labeling for food services (proposed in 2015). Numerous bills focused on creating "food truck hubs" to improve access to healthy foods in areas with limited options have been passed annually since 2015. Moreover, the Board of Health has pursued innovative partnerships to promote the health of residents. In 2015, the Board of Health engaged in an innovative partnership with several local churches to promote weight loss over a 3-month period. This collaboration was motivated by research suggesting that regular church attendance was associated with a greater risk of obesity (Feinstein, Liu, Ning, Fitchett, & Lloyd-Jones, 2012). In 2018, the Board of Health collaborated with Clinical Pharmacy Associates, Inc. to launch a pilot project connecting about 200 seniors in the County with clinical pharmacists to deliver care virtually, an approach known as "telepharmacy" (Council News, 2018). With a history of engagement in health promotion and at the cusp of a new hospital, the Board of Health is poised to pursue new approaches to promoting and budgeting for health.

The past decade has also seen great attention to the health and health care needs of County residents. Key studies are highlighted in Figure 1.1. These prior studies were conducted by County departments and outside partners and serve to highlight the health and health care needs of residents and in some cases, to provide recommendations for resource allocation and planning. The studies cover a range of topics, including community health, health care workforce, health equity, immigrant health, maternal and infant health, and opioid overdoses. Nearly all studies have highlighted racial/ethnic disparities in health outcomes. Overall, the past research and discussion surrounding the health of Prince George's County residents underscore three themes:

1. There exists a high demand, yet low supply of primary care providers in the County. The dynamic is further exacerbated by transportation challenges experienced by some within the county to obtain health care services.
2. Social determinants of health play a key role in influencing health outcomes for County residents.
3. Bolstering existing nonprofit capacities by encouraging collaborations can increase the ability of the County to serve the health needs of residents.

Figure 1.1.
Examples of Key Reports Highlighting the Health Needs of County Residents

<p><u>Community health needs assessments</u></p> <ul style="list-style-type: none">• <i>Prince George's County Community Health Assessment</i> from the Prince George's County Health Department (2016; 2019b). <p><u>Healthcare and health</u></p> <ul style="list-style-type: none">• <i>Assessing Health and Health Care in Prince George's County</i> from the RAND Corporation (2009).• <i>Transforming Health in Prince George's County, Maryland: A Public Health Impact Study</i> from the University of Maryland School of Public Health (2012).• <i>Prince George's County Primary Healthcare Strategic Plan</i> from the County (2014).• <i>Prince George's County Behavioral Health System Needs Assessment, Gap Analysis, and Action Plan</i> from Health Management Associates (2015).• <i>The Healthcare Landscape in Prince George's County: Opportunities for Improvement</i> from Regional Primary Care Coalition (2018). <p><u>Health equity</u></p> <ul style="list-style-type: none">• <i>Transformative Change: Our Role in Achieving Health Equity for Prince George's County</i> from the Prince George's Healthcare Action Coalition (2018).• <i>Uneven opportunities: How conditions for wellness vary across the Metropolitan Washington Region</i> from the VCU Center on Society and Health for the Metropolitan Washington Council of Governments (2018). <p><u>Immigrant health</u></p> <ul style="list-style-type: none">• <i>Partnering for Health Equity: Strategies, Partnerships and Recommendations for Immigrants' Health in Prince George's County</i> from La Clínica Del Pueblo (2018). <p><u>Maternal and infant health</u></p> <ul style="list-style-type: none">• <i>Maternal and Infant Health Report</i> from the County Health Department (2019c). <p><u>Substance abuse</u></p> <ul style="list-style-type: none">• <i>Opioid Overdose Report</i> from the County Health Department (2018a).

Contributions of This Report

This report adds to a rich foundation of analyses, in particular the 2019 Community Health Needs Assessment led by Prince George's County Health Department (Prince George's County Health Department, 2019b). To accomplish our goal of conducting a holistic analysis of the broad environmental and service influences on health and well-being in the County necessarily requires some redundancy with other reports, particularly those which have focused on health outcomes. For example, similar to other reports, this report uses secondary data to describe county demographics, self-reported health outcomes, and health care utilization, and primary data to describe priorities articulated by residents and community leaders. While this information will be familiar to readers well-versed on the health needs of residents, its inclusion is an important component in describing the relative contributions of broader environmental and

service influences on health and well-being and in informing recommendations related to an integrated *Health in All Policies* approach (see next section).

In Figure 1.2, we situate this report with the 2019 Community Health Needs Assessment and other recent reports, by highlighting the key features of this report that distinguish it from existing work. As noted in the table, key contributions of this report include its holistic examination of drivers of health, broad assessment of health care providers, and recommendations to support future integrated health planning in the County. By offering a broad overview of drivers of health (e.g., social, economic, natural, built, and health service environments) along with health and well-being, we seek to provide integrated information to inform the County’s movement toward a *Health in All Policies* approach to policymaking. Because each driver of health could warrant its own lengthy reporting examining its relationship to health and well-being, in this report we focus on describing the wide variety of drivers of health and note opportunities for future exploration. Our recommendations are particularly focused on policy actions that involve cross-government department strategies, associated data, and financial alignment. With these recommendations, we provide examples used in other jurisdictions to help the County understand how these approaches have been practically implemented in other settings.

Figure 1.2.
Key Features of This Report

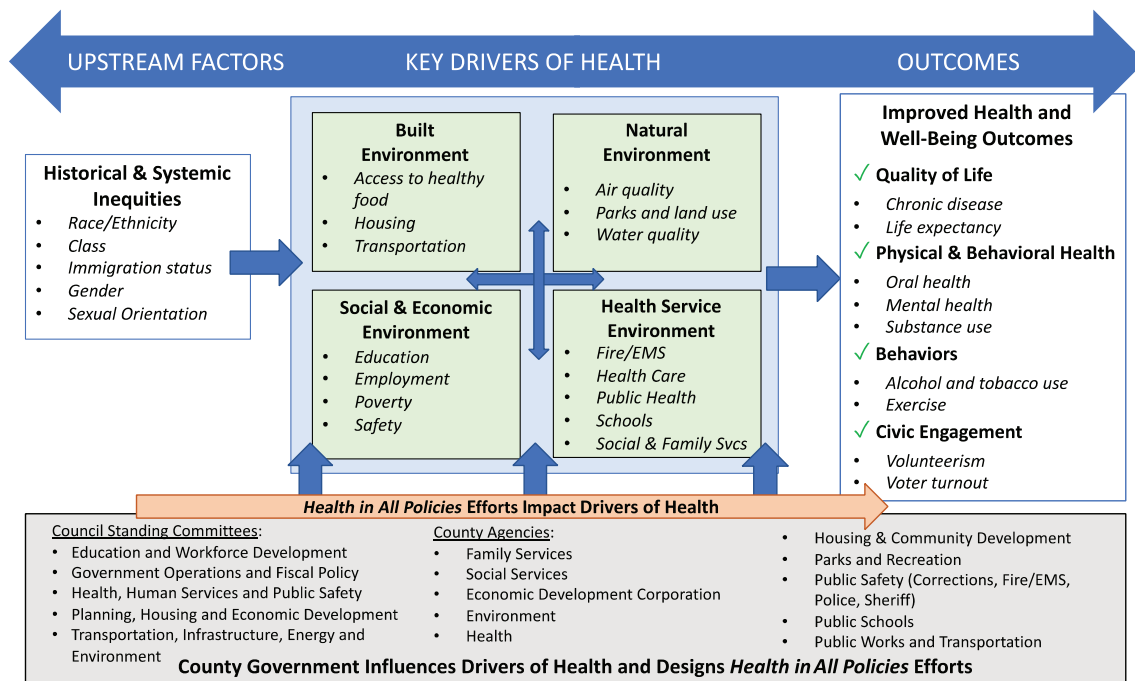
Provides broad review of health influences, from the social, economic, built, and natural environments.
Offers insight into role of schools and human services departments in promoting health.
Utilizes health care discharge data from both Maryland and District of Columbia (DC), highlighting key role of care provision from providers in DC.
Examines health care provision outside of traditional health care providers, including schools, fire/EMS, and corrections.
Situates recommendations via <i>Health in All Policies</i> , inclusive of budget alignment and legislative action levers.
Establishes a foundation for future integrated health planning for the County.

Framework for Understanding Health and Human Services Needs

As noted earlier, this report is organized by a framework that can be used by the County to implement *Health in All Policies*. The framework emphasizes the interconnectedness of health and well-being, systemic factors that influence health over generations, drivers of health, and health systems (Figure 1.3). First introduced outside of the United States (U.S.) (Melkas, 2013), *Health in All Policies* in the U.S. was adopted by the Centers for Disease Control and Prevention (CDC), and defined as a “collaborative approach that integrates and articulates health considerations into policymaking across sectors to improve the health of all communities and people” (Centers for Disease Control and Prevention, 2016). *Health in All Policies* requires interagency collaboration and thoughtful consideration of health equity (Rudolph, Caplan, Ben-Moshe, & Dillon, 2013).

Our framework (Figure 1.3) illustrates how health and well-being cannot be considered independently from historical and systemic inequities and drivers of health that shape opportunities and environments. As articulated in this framework, *health and well-being* are downstream outcomes and are described by quality of life, physical and behavioral health, healthy behaviors, and civic engagement (given links between *connection to community* and *health outcomes*) (Nelson et al., 2019). While health and well-being are influenced by genetic composition, health and well-being are largely affected by upstream factors and drivers in the broader environment.

Figure 1.3.
Improving Health and Well-Being through an Integrated *Health in All Policies* Approach



NOTES: Bulleted items in italics are examples only. Our framework was informed by the Bay Area Regional Health Inequities Initiative’s Public Health Framework for Reducing Health Inequities (Bay Area Regional Health Inequities Initiative, 2019), and modified specifically for Prince George’s County.

In the figure, *drivers of health* describe the conditions that influence health, namely the social, economic, natural, built, and health service environments, which influence health at both individual and community levels (Centers for Disease Control and Prevention, 2018). While the health care system is widely recognized as impacting health, public health systems are essential for promoting both individual- and community-level health by conducting health promotion activities and engaging in disease surveillance. In addition, the social, built, and natural environments also play a key role in health and well-being due to the associated consequences related to access, lifestyle, and choices. For example, studies report that food insecurity, lack of stable housing, low income status, and limited education are associated with poor health outcomes (Leonard, Hughes, Donegan, Santillan, & Pruitt, 2018; Vásquez-Vera et al., 2017; Walker, Gebregziabher, Martin-Harris, & Egede, 2014).

In this framework, we also name the *government departments* in Prince George's County and *standing committees* in the County Council that influence these drivers of health. It should be noted that while this framework explicitly names these government departments and committees, nongovernmental organizations are a key part of influencing health and the drivers of health.

Finally, we use the term “upstream” to describe the macro-level factors that affect health and well-being (Bharmal, Derose, Felician, & Weden, 2015). *Historical and systemic inequities*, inclusive of systemic racism and bias against historically marginalized groups, influence drivers of health (e.g., living conditions, educational and economic opportunities, access to social and health services) and ultimately shape the downstream outcomes of health and well-being. In addition to these inequities impacting health via drivers of health, research indicates that accumulated stress, or allostatic load, such as due to racial trauma, may have direct impacts on health (Chandra, Cahill, Yeung, & Ross, 2018). Throughout this framework and assessment, we emphasize the role of equity across the key drivers of health, recognizing that equal provision of services will not lead to equal outcomes when individuals and communities have varying levels of need. While equality suggests that all people receive the same amount of resources, equity emphasizes fairness as proportionate to need and history. Understanding equity, particularly within a society with a long history of systemic and structural racism and bias against marginalized groups, is imperative for implementing fair health and human services policy, and is a tenet emphasized by the U.S. Department of Health and Human Services (Secretary's Advisory Committee for Healthy People 2030, (2018)).

Approach

To describe the health and human services needs of County residents, we relied on both primary and secondary data. Primary data collection involved obtaining input via

- One Town Hall meeting attended by approximately 70 residents during June 2019 at the Prince George's County Administration Building in Upper Marlboro. An online survey was also used to capture comments from residents who were unable to attend this meeting.
- Three focus groups composed of 24 residents. These groups were distributed geographically in the North, Central, and South regions of the County and included residents who were recruited by council members with the goal of being demographically representative of each district.
- One focus group composed of 12 adolescents and young adults living in the County.
- Interviews with 23 organizations addressing the health and human services needs of County residents, including 15 government agencies and 8 nonprofit organizations serving County residents.

The Town Hall meeting, interviews, and focus groups offered an opportunity for residents and employees of County departments and nongovernmental organizations to share their perspectives and subjective experiences. A full description of how primary data was collected and analyzed, including the protocols for the focus groups and interviews, is available in Appendix A. Briefly, comprehensive notes were taken and augmented by audio recordings. To identify key themes, notes from all primary data collection activities were combined, then the

study team reviewed notes and categorized key themes from the work. Findings from residents and organizational leaders were analyzed together and are presented together as findings from stakeholders. Themes were identified as priority based on the level of comment obtained across stakeholders (e.g., frequency, relative importance), and reviewed by at least two study team members to ensure the team agreed on that priority identification. We describe these findings as responses from “stakeholders,” which is inclusive of both residents and employees of County departments and nongovernmental organizations, to emphasize the key role that all respondents play in improving the County overall health and well-being.

In addition, we collected county and sub-county secondary data from a variety of public and proprietary sources to describe the current and historical health and human services needs of County residents. Data were obtained from numerous County departments (e.g., Departments of Corrections, Family Services, Social Services), public sources (e.g., American Community Survey, Behavioral Risk Factor Surveillance Survey), and proprietary sources (e.g., Maryland Healthcare Services Cost Review Commission and the District of Columbia Hospital Association). The data sources used in this report and some details on quantitative analysis are described in each chapter the data appear as well as comprehensively described in Appendix B. Indicators included in this report were selected based on data availability with attention to reflecting all areas of our framework and also to highlight indicators that have not previously been included in prior reports related to health needs in Prince George's County. Together, these data describe drivers of health affecting County residents, including the social and economic environment, built environment, natural environment, and health service environment, as well as the overall health and well-being of County residents. Our goal was to obtain and analyze longitudinal data to describe trends over time, make comparisons between Prince George's County residents and residents of nearby counties (Baltimore County, Howard County, and Montgomery County) and the state of Maryland, and to make comparisons within the County (e.g., examine data at the neighborhood or other sub-county level). With such a large number of data sources providing diverse information in this report, it is nearly impossible to present information uniformly across chapters. For example, some data sources report information stratified by race and Hispanic ethnicity, yet others do not. There is value in presenting trends over time, across counties, and within the County, however not all data sources enable these types of analyses, and for some data sources, this information has been presented in other reports. Therefore, we begin each chapter with a summary of the data sources to be presented and an overview of how the data will be presented to guide the reader.

In order to inform the recommendations at the end of the report, we also reviewed promising practices from other communities and regions in the United States, particularly focused on some of the challenges that Prince George's County faces with respect to integration of health and human services, such as governance, data systems, and investment alignment. We also reviewed Prince George's proposed operating budgets to describe where funding has been allocated to health and specifically drivers of health across County departments.

Organization of the Report

Given the decisions that the County has to make and, in the context described above, it is important that this report serves as a foundational document to examine

- What is really driving these health outcomes?
- Where services are coming from and where there could be gaps or misalignment?
- What the County should do first to move more effectively toward a *Health in All Policies* approach to policymaking?

The report is organized as follows:

- Chapter Two offers a profile of the population, documenting trends, comparisons to other counties, and comparisons within the County.
- Chapter Three describes health and well-being outcomes for County residents.
- Chapters Four - Six describe what may be driving those outcomes, describing the roles of the health care, social and economic, and built and natural environments. Where relevant, we provide findings by populations that have special needs, such as pregnant women, seniors, and people experiencing homelessness.
- Chapter Seven provides several exemplars illustrating the linkages of drivers of health and health outcomes for two populations receiving significant attention given emergent and chronic needs: children and foreign-born noncitizen immigrants. *In Chapters Three - Seven, we offer next steps regarding data limitations and future data analyses.*
- Chapter Eight offers an overview of key trends in health budgeting in the County.
- Chapter Nine concludes with a summary of findings and recommendations to implement *Health in All Policies* effectively. These recommendations are based on findings from primary and secondary data, review of budget documents, and an environmental scan of promising practices utilized by other jurisdictions.

While the County Board of Health is the key audience for this report, it is also likely to be highly informative to organizations within and outside the County government focused on addressing the health and human services needs of residents. Additionally, other communities considering a *Health in All Policies* approach are likely to find the last chapter and the examples of different strategies informative.

2. Demographic Profile

Background

Despite improvements in health outcomes in the U.S. over the last two decades, inequities remain. For example, the life expectancy for Black persons is nearly four years less than that of whites (Cunningham et al., 2017). Further, disparities remain in the prevalence of cardiovascular disease, the leading cause of death in the United States, and its risk factors, for Black and Hispanic individuals compared to Whites (Mensah, Mokdad, Ford, Greenlund, & Croft, 2005). Thus, understanding the demographic characteristics of Prince George’s County residents, including distributions across age, race/ethnicity, sex, and so forth is critical to a baseline assessment of health and well-being in the County.



Key data used in this chapter comes from the American Community Survey (ACS). Longitudinal county-level information is derived from annual surveys (2009-2018). To examine sub-county characteristics (e.g., across districts), information is derived from pooled surveys (2014 to 2018).

Population Demographics Over Time

Table 2.1 below describes the demographics of Prince George’s County from 2009 to 2018. The population aged 65 years or older increased by about 4 percentage points over these ten years. The percentage of Hispanic residents increased by nearly 6 percentage points, the largest percentage point change observed across all race/ethnicity groups. The percentage of foreign-born residents and limited English-speaking households also increased. The prevalence of female-headed, single parent households with children under the age of 18 decreased by 3 percentage points.

Table 2.1.
Demographics of Prince George’s County Over Time, 2009–2018

	Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Age										
Younger than 18 years	24.7	23.7	23.5	23.1	22.7	22.7	22.5	22.4	22.3	22.2
Aged 18 - 39 years	31.7	33.3	33.3	33.4	32.7	32.5	32.3	32.4	31.8	31.5
Aged 40 - 64 years	34.1	33.5	33.4	33.3	33.7	33.5	33.5	32.9	33.2	33.0
Aged 65 years or older	9.4	9.5	9.8	10.3	10.8	11.3	11.7	12.3	12.8	13.3
Sex										
Female	51.9	52.0	51.9	52.0	51.9	51.8	51.8	51.9	51.8	51.9
Male	48.1	48.0	48.1	48.0	48.1	48.2	48.2	48.1	48.2	48.1
Race/Ethnicity										
White	16.9	14.9	15.2	14.7	14.3	14.1	13.8	13.0	12.6	12.3
Black	63.6	63.6	63.3	62.6	62.8	62.1	61.6	62.0	62.0	61.3
American Indian and Alaska Native	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Asian	3.9	4.1	4.1	4.2	4.3	4.4	4.3	4.2	4.3	4.1
Native Hawaiian and Other Pacific Islander	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.2	0.1	0.3	0.2	0.4	0.2	0.5	0.3	0.4	0.6
Two or more races	1.7	2.1	1.6	2.4	1.7	2.2	2.3	2.5	2.0	2.6
Hispanic	13.5	15.0	15.2	15.7	16.2	16.9	17.2	17.8	18.5	19.1
Place of Birth										
Foreign born	18.1	19.9	21.0	20.8	20.6	21.8	22.8	22.2	22.6	23.6
English Proficiency										
Limited English-speaking household	*	*	*	*	*	*	*	5.8	6.1	6.9
Household composition										
Single person with no own children <18 years	18.4	21.1	20.1	22.2	21.8	22.4	21.3	22.3	23.9	19.7
Single parent with own children <18 years	20.0	21.4	21.0	20.3	20.5	19.2	17.0	18.3	15.4	17.0
Female householder, no husband present with own children <18	15.7	16.2	16.8	15.8	16.0	14.3	12.5	13.4	11.3	12.7
Marital status										
Age 15+ married	37.0	34.3	34.7	33.3	34.2	34.5	35.5	33.4	35.2	36.6

SOURCE: U.S. Census Bureau, 2019a.

NOTES: Data in table were obtained from the American Community Survey 1-Year Summary Files, 2009-2018. In this table and throughout the report, we use the term “Hispanic” to describe persons who identify as Hispanic, Latino, and Latina. This term describes a person from Cuba, Mexico, Puerto Rico, South or Central America, or other Spanish culture or origin. *Indicates not available.

Population Demographics Compared to Neighboring Jurisdictions

Compared to the state overall, Prince George’s County has a higher percentage of residents who are Hispanic (17.9 percent vs. 9.8 percent) and a higher percentage of households with limited English proficiency (5.5 percent vs. 3.2 percent). When compared to nearby counties of Baltimore, Howard, and Montgomery, the population of Prince George’s County is younger (only 12.3 percent of residents are aged 65 or older), more likely to be Black, and less likely to be married (Table 2.2).

Table 2.2.
Demographics, by County and State, Pooled 2014–2018

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Age					
Younger than 18 years	22.5	21.6	24.5	23.4	22.4
Aged 18 - 39 years	31.9	29.2	27.1	28.0	29.4
Aged 40 - 64 years	33.4	32.7	35.4	34.0	33.6
Aged 65 years or older	12.3	16.5	13.0	14.6	14.6
Sex					
Female	51.8	52.6	51.1	51.7	51.5
Male	48.2	47.4	48.9	48.3	48.5
Race/Ethnicity					
White	13.0	58.1	53.1	44.5	51.4
Black	62.0	27.9	18.2	17.7	29.3
American Indian and Alaska Native	0.2	0.2	0.2	0.1	0.2
Asian	4.1	5.9	17.7	14.6	6.2
Native Hawaiian and Other Pacific Islander	0.0	0.0	0.0	0.0	0.0
Other	0.4	0.2	0.5	0.5	0.3
Two or more races	2.3	2.3	3.6	3.3	2.8
Hispanic	17.9	5.3	6.7	19.3	9.8
Place of Birth					
Foreign born	22.4	12.4	21.1	32.3	15.1
English Proficiency					
Limited English–speaking household	5.5	2.6	3.1	6.7	3.2
Household composition					
Single person with no own children <18 years	21.8	15.3	8.7	11.1	14.6
Single parent with own children <18 years	17.2	14.1	9.8	10.9	13.6
Female householder, no husband present with own children <18	12.7	10.7	7.8	8.0	10.2
Marital status					
Age 15+ married	35.3	43.4	55.0	49.7	44.3

SOURCE: U.S. Census Bureau, 2019b.

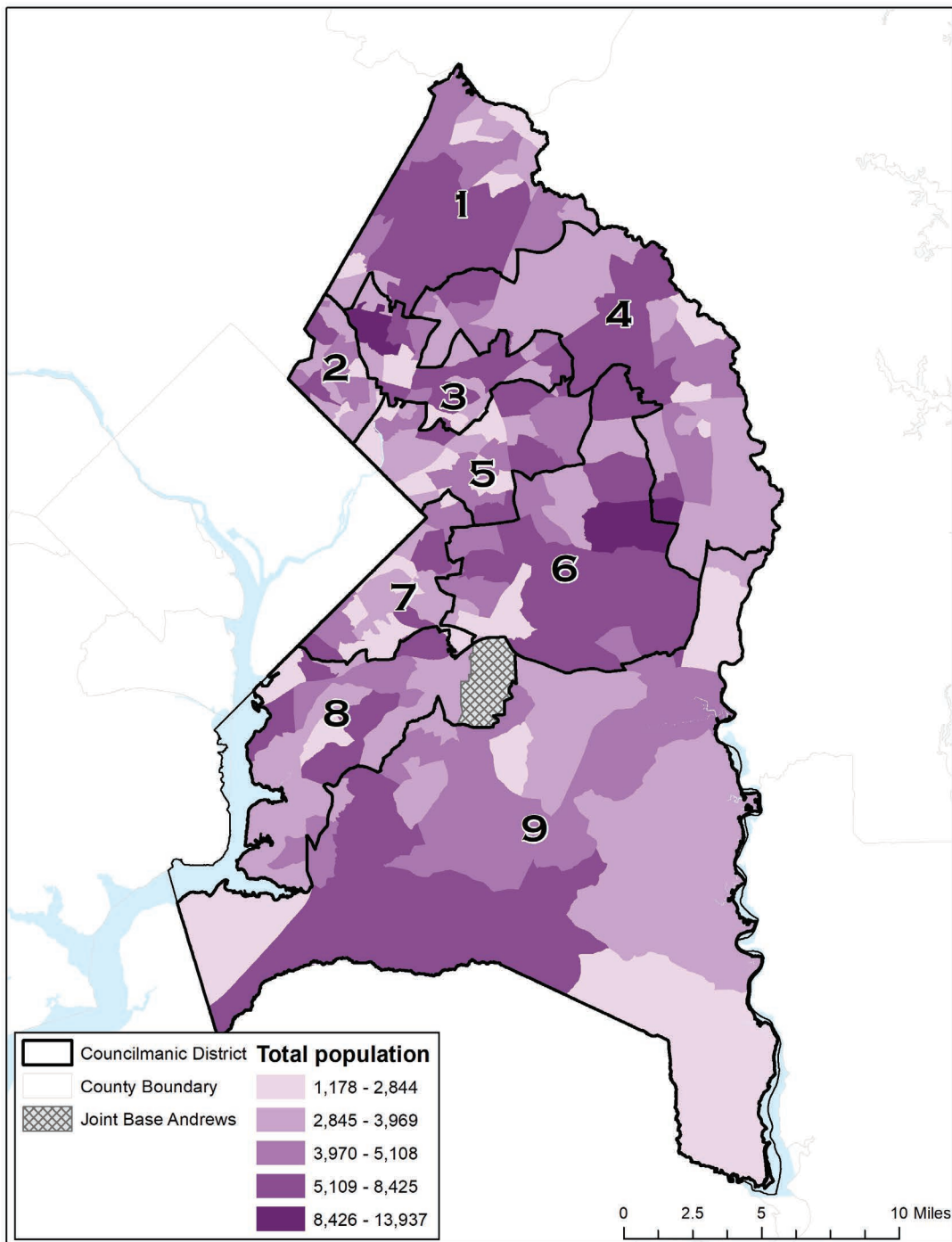
NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014-2018.

Population Demographics Compared Across County Districts

We also used the ACS data to examine the County's nine councilmanic districts. Figure 2.1 illustrates where people live in the County, by census tract. The population is similar across districts, with an average of about 100,700 residents per district. Most districts have more than 100,000 residents, with only Districts 2, 7, and 8 having slightly fewer than 100,000 residents.

About 23 percent of the County population is younger than 18 years, and about 12 percent is aged 65 years or older. This age distribution is similar across districts, with District 8 having a slightly higher proportion of adults aged 65 years or older (15.4 percent) (Table 2.3). Residents of Prince George's County are predominantly Black (62.3 percent) and 17.4 percent of residents are Hispanic. Additionally, more than one in five residents were born outside the United States. While residents of the County are predominantly Black, there is evidence of segregation by racial and ethnic groups. Black residents are highly concentrated in Districts 5, 6, 7, 8, and 9, where they make up more than 70% of each district's population. Fewer than 50% of residents are Black in Districts 1, 2, and 3. In District 2, more than 50% of residents are Hispanic. In District 2, nearly half the residents are born outside the United States and 21.8 percent of households report a limited ability to speak English.

Figure 2.1.
Map Illustrating Distribution of Population throughout Prince George’s County, Pooled 2014–2018



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Rates provided for the civilian noninstitutionalized population. Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Table 2.3.
Demographics of Prince George's County, by District, Pooled 2014–2018

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Age										
Younger than 18 years	22.5	23.2	24.7	21.4	22.2	25.2	21.4	22.8	20.4	20.9
Aged 18 - 39 years	31.9	32.3	37.8	42.2	28.1	30.0	28.8	32.3	30.5	25.6
Aged 40 - 64 years	33.4	33.2	28.8	27.0	36.6	32.0	37.1	32.5	33.7	38.8
Aged 65 years or older	12.3	11.4	8.7	9.3	13.0	12.8	12.7	12.5	15.4	14.6
Sex										
Female	51.8	50.7	48.5	49.9	52.6	52.9	53.8	54.0	52.6	51.7
Male	48.2	49.3	51.5	50.1	47.4	47.1	46.2	46.0	47.4	48.3
Race/Ethnicity										
White	13.0	22.2	9.2	21.8	27.6	6.2	4.7	3.2	8.0	12.1
Black	62.0	43.6	33.3	40.5	51.7	70.3	87.0	86.9	71.0	74.9
American Indian and Alaska Native	0.2	0.3	0.2	0.3	0.1	0.2	0.1	0.1	0.2	0.3
Asian	4.1	9.1	3.3	6.9	6.2	2.1	1.5	0.6	4.6	2.6
Native Hawaiian and Other Pacific Islander	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Other	0.4	0.5	0.4	0.4	0.5	0.3	0.5	0.2	0.3	0.5
Two or more races	2.3	2.6	1.4	2.9	3.3	1.8	2.1	1.5	2.2	2.8
Hispanic	17.9	21.6	52.2	27.2	10.5	19.1	4.1	7.4	13.6	6.7
Place of Birth										
Foreign born	22.4	32.9	48.2	33.4	20.0	24.0	11.5	8.5	14.9	8.6
English Proficiency										
Limited English-speaking household	5.5	6.6	21.8	9.5	3.1	5.0	1.0	1.6	3.7	0.8
Household composition										
Single person with no own children <18 years	21.8	17.4	24.7	20.7	16.6	25.7	22.4	29.4	23.9	17.1
Single parent with own children <18 years	17.2	13.9	22.4	15.9	13.8	19.9	17.0	28.8	15.9	10.1
Female householder, no husband present with own children <18	12.7	9.7	12.1	11.2	10.8	15.5	14.0	23.3	11.5	7.4
Marital status										
Age 15+ married	35.3	39.2	28.5	30.2	42.6	33.1	36.6	24.0	36.0	45.8

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Individuals are civilian noninstitutionalized. Data in table were obtained from the American Community Survey 5-Year Summary File, 2014-2018.

Summary

Prince George's County is diverse, with some demographic patterns varying regionally. Within the County, demographics have remained relatively unchanged. However, the percentage of foreign-born residents has increased since 2009. Compared to other nearby counties, Prince George's County has a higher percentage population of Hispanic residents (17.9 percent). Within the County, there is notable segregation by racial and ethnic groups. County residents are predominantly Black and compose more than 70 percent of the population in Districts 5, 6, 7, 8, and 9. Fewer than 50 percent of residents are Black in Districts 1, 2, and 3. In District 2, more than 50 percent of residents are Hispanic. Notable demographic characteristics for each district are highlighted below:

- District 1 has a higher proportion of White (22.2 percent), Asian (9.1 percent), and foreign-born (32.9 percent) residents than the County average (13.0 percent, 4.1 percent, and 22.4 percent, respectively).
- District 2 has a very high proportion of foreign-born (48.2 percent) residents and the highest proportion of Hispanic residents (52.2 percent) compared to all other districts.
- District 3 has a higher proportion of White (21.8 percent) and Hispanic (27.2 percent) residents than the County average (13.0 percent, 17.9 percent, respectively).
- District 4 has a higher proportion of White (27.6 percent) residents than the County average (13.0 percent).
- Districts 5 through 9 have predominantly Black residents, with the proportion of this group ranging between 71 percent and 87 percent of the district population for these five districts.
- Districts 8 and 9 also have a higher proportion of 65 years and older residents than other districts (15.4 percent and 14.6 percent, respectively, versus 12.3 percent for the County average).

3. Health and Well-Being

Background

In this chapter, we describe the health and well-being of County residents. Health is the term broadly used to describe physical and mental health outcomes. Well-being encompasses a variety of factors that are part of a full and safe life, such as participation in healthy behaviors, activities related to health promotion, and civic engagement. As illustrated in our conceptual framework (Figure 1.3), health and well-being are largely influenced by the social, economic, built, natural, and health service environments, as well as by historical and systemic inequities.

Before discussing the roles of those drivers of health, here in this chapter we first describe health and well-being among County residents. As will be noted in this chapter, the information on health and well-being is currently limited, which informs a recommendation for the County going forward as it pursues *Health in All Policies* (see Chapter Nine). When feasible, we sought to examine inequities in health outcomes, including by race/ethnicity and socioeconomic characteristics.



Key data used in this chapter include information from Robert Wood Johnson Foundation's (RWJF) County Health Rankings, CDC WONDER, the CDC Behavior Risk Factor Surveillance System (BRFSS), the Maryland Youth Risk Behavior Survey & Youth Tobacco Survey (YRBS/YTS), the Maryland Cancer Prevention, Education, Screening and Treatment data, and the Pregnancy Risk Assessment Monitoring System (PRAMS), among other vital statistics.

We begin this chapter by describing Prince George's County's relative rankings within RWJF's County Health Rankings, which provide a high-level summary of health and well-being in the County. Next, we summarize indicators of health outcomes, focusing on the following topics:

- Life expectancy
- Leading causes of death
- Health status and chronic conditions
- Cancer screening, incidence, and mortality
- Disability
- Mental health

- Substance use disorder
- Sexual health
- Maternal and infant health

After that, we summarize indicators of well-being, inclusive of

- Health literacy
- Health behaviors
- Civic engagement

We end the chapter by sharing key themes that emerged during our stakeholder discussions related to health and well-being and synthesizing the available primary and secondary data.

County Health Rankings

RWJF began the County Health Rankings project in 2010 to monitor county health performance across the United States. Health indicators and social determinants are aggregated to rank counties within each state based on (1) health outcomes and (2) health factors. The health outcomes ranking is based on indices measuring length of life and quality of life. Length of life metrics include premature death, measured as years of potential life lost, life expectancy, and various mortality rates. Quality of life metrics “refer to how healthy people feel while alive” and include indicators of poor or fair health, poor physical health days, poor mental health days, low birthweight, frequent physical distress, frequent mental distress, diabetes prevalence, and HIV prevalence (County Health Rankings, 2019c). As illustrated by Table 3.1, Prince George’s County ranked 11th of 24 counties in Maryland for health outcomes in 2019.

Table 3.1.
County Health Rankings by Health Outcomes, Length of Life, and Quality of Life, 2019

Health Outcomes		Length of Life		Quality of Life	
Rank	County	Rank	County	Rank	County
1	Montgomery	1	Montgomery	1	Montgomery
2	Howard	2	Howard	2	St. Mary's
3	Frederick	3	Frederick	3	Howard
4	Carroll	4	Carroll	4	Carroll
5	St. Mary's	5	Talbot	5	Calvert
6	Calvert	6	Harford	6	Queen Anne's
7	Queen Anne's	7	St. Mary's	7	Frederick
8	Anne Arundel	8	Anne Arundel	8	Anne Arundel
9	Talbot	9	Calvert	9	Talbot
10	Harford	10	Prince George's	10	Worcester
11	Prince George's	11	Queen Anne's	11	Harford
12	Charles	12	Kent	12	Baltimore
13	Baltimore	13	Charles	13	Charles
14	Kent	14	Garrett	14	Prince George's
15	Garrett	15	Baltimore	15	Cecil
16	Worcester	16	Washington	16	Washington
17	Washington	17	Caroline	17	Garrett
18	Cecil	18	Wicomico	18	Wicomico
19	Wicomico	19	Allegany	19	Kent
20	Allegany	20	Cecil	20	Allegany
21	Caroline	21	Dorchester	21	Caroline
22	Dorchester	22	Worcester	22	Dorchester
23	Somerset	23	Somerset	23	Somerset
24	Baltimore City	24	Baltimore City	24	Baltimore City

SOURCE: County Health Rankings, 2019b.

NOTES: Possible ranking out of 24 counties in Maryland.

RWJF also ranks counties on “health factors,” which are based on measures related to health behaviors, clinical care, social and economic factors, and the physical environment. Health behaviors are “actions individuals take that affect their health” and includes metrics on physical activity and actions related to chronic disease such as smoking, alcohol intake, and risky sexual behavior. Clinical care assesses a county’s accessibility to affordable and quality health care. Subsequent chapters in this report focused on drivers of health will further describe the measures related to social and economic factors and the physical environment. In Table 3.2, we illustrate the County’s rankings for health factors, health behaviors, and clinical care over time.

In 2019, Prince George’s County was ranked as follows: health factors = 16th, health behaviors = 11th, and clinical care = 24th. Currently, Prince George’s County is ranked last in the state for clinical care. This is primarily due to the County having the highest uninsurance rate in Maryland in 2019. These results are also driven by low rates of mammography screenings (36 percent screened in 2019) and low rates of flu vaccinations (37 percent vaccinated in 2019) in the County. Comparatively, the state-wide average rate for mammography screenings is 42 percent and flu vaccinations is 48 percent.

Table 3.2.
County Health Rankings for Health Factors, Prince George’s County 2010–2019

Year	Health Factors Rank	Health Behaviors Rank	Clinical Care Rank
2010	14	12	21
2011	18	12	22
2012	17	10	17
2013	17	9	20
2014	14	8	21
2015	15	9	23
2016	16	11	23
2017	16	11	23
2018	16	10	22
2019	16	11	24

SOURCE: County Health Rankings, 2019b.

NOTES: Possible ranking out of 24 counties in Maryland.

Health Outcomes

In the following section, we describe health outcomes of residents in Prince George’s County. Some of this information has been presented elsewhere, including the 2019 Prince George’s County Community Health Assessment (Prince George’s County Health Department, 2019b). However, presenting similar information here, in a report focused on exploring the broad drivers of health, facilitates further connection between health and well-being and the drivers of health. To augment redundant information, we focus on comparisons across jurisdictions and comparisons within the County (e.g., across districts and across additional subgroups). This section includes discussion of the following health outcomes:

- Life expectancy
- Leading causes of death
- Health status and chronic conditions
- Cancer screening, incidence, and mortality
- Disability
- Mental health
- Substance use disorder
- Sexual health
- Maternal and infant health.

Life Expectancy

Years of potential life lost (YPLL) is used to measure premature death. Compared to mortality, it emphasizes deaths that could have been prevented. As illustrated in Table 3.3, Prince George’s County has a lower overall rate of YPLL than the state and Baltimore County. However, both Howard and Montgomery counties have considerably lower rates of YPLL. Within Prince George’s County, the YPLL rate was greater for Black residents than White and Hispanic residents.

Table 3.3.
Years of Potential Life Lost Rate per 100,000 by Jurisdiction and Race/Ethnicity, Pooled 2015–2017

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
YPLL Rate	6,862	7,783	4,222	4,099	7,067
YPLL Rate by Race/Ethnicity					
Black (B)	7,964	8,991	5,573	5,800	*
Hispanic (H)	3,964	3,863	2,728	3,397	*
White (W)	6,535	7,973	4,379	4,137	*
YPLL Ratio					
B : W Ratio	1.2	1.1	1.3	1.4	*
H : W Ratio	0.6	0.5	0.6	0.8	*

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from the National Center for Health Statistics Mortality Files 2015-2017. Table presents years of potential life lost before age 75 per 100,000 population (age-adjusted). YPLL, Years of Potential Life Lost. *Data not available.

Leading Causes of Death

In Table 3.4, we present the notable leading causes of death in Prince George’s County in 2017, derived from the Centers for Disease Control and Prevention (CDC) WONDER Online Database. Compared to Maryland, the mortality rates in Prince George’s County were higher for heart disease, cancer, stroke, diabetes, nephritis, septicemia, hypertension, and homicides. Within Prince George’s County, heart disease and cancer were the primary causes of death in 2017. Additional exploration of mortality rates by race/ethnicity are presented in the 2019 Prince George’s County Community Health Needs Assessment (Prince George’s County Health Department, 2019b).

Table 3.4.
Leading Causes of Death, Rates per 100,000 Population, 2017

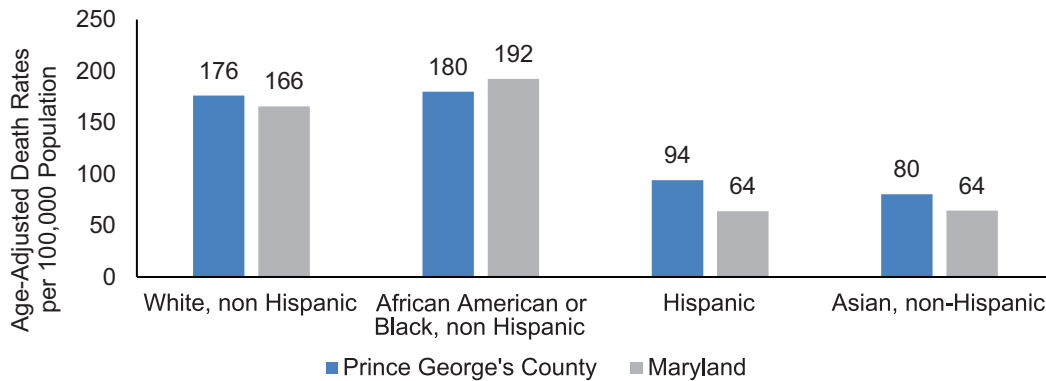
	Prince George’s County	Maryland
All causes	712.5	718.1
Heart disease	167.5	164.5
Cancer	155.7	151.5
Stroke	46.7	40.2
Accidents	30.6	36.9
Diabetes	28.6	20.3
Chronic lower respiratory diseases	21.9	29.9
Nephritis	14.9	11.9
Alzheimer’s disease	16.0	17.1
Septicemia	13.5	12.5
Hypertension	14.0	8.3
Influenza and pneumonia	14.0	14.0
Homicide	10.4	10.2
Liver disease	6.1	6.6
Suicide	6.5	9.8
Perinatal conditions	7.0	4.8

SOURCE: Centers for Disease Control and Prevention, 2019b.

NOTES: Data was accessed from CDC WONDER in 2019 and represents 2017. Rates are age-adjusted and presented per 100,000 population.

In the figures below, we describe mortality rates by race/ethnicity for the top two leading causes of death in the County: heart disease and cancer. Mortality rates for heart disease in the County were highest for Black residents (180 per 100,000) and White residents (176 per 100,000). The rates for White, Hispanic, and Asian residents were higher than the state rates for each of the aforementioned racial/ethnic group.

Figure 3.1.
Mortality Rates per 100,000 Population for Heart Disease, by Race/Ethnicity, 2017

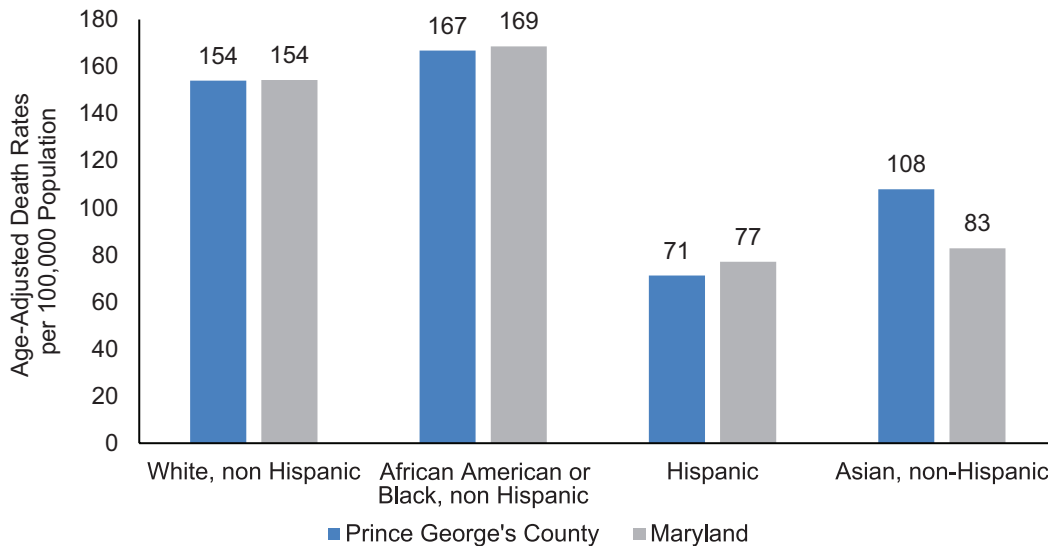


SOURCE: Centers for Disease Control and Prevention, 2019b.

NOTES: Data was accessed from CDC WONDER in 2019 and represents 2017. Rates are age-adjusted and presented per 100,000 population.

Figure 3.2 presents mortality rates for malignant cancer by race/ethnicity in Prince George's County and Maryland. Mortality rates for malignant cancer in the County were highest for Black residents (167 per 100,000) and White residents (154 per 100,000). The rate for Asian residents was higher in the County (108 per 100,000) than the state rate (83 per 100,000).

Figure 3.2.
Mortality Rates per 100,000 Population for Malignant Cancer by Race/Ethnicity, 2017



SOURCE: Centers for Disease Control and Prevention, 2019b.

NOTES: Data was accessed from CDC WONDER in 2019 and represents 2017. Rates are age-adjusted and presented per 100,000 population.

Health Status and Chronic Conditions

Health conditions are considered chronic if they are long lasting, generally lasting at least three months and often more than one year. Chronic health conditions may require ongoing medical care, medication, and limit usual activities. Engaging in healthy behaviors (e.g., healthy diet, exercise, and not smoking) can prevent many chronic conditions (National Center for Chronic Disease Prevention and Health Promotion, 2019). Drivers of health, such as those that are part of the built environment (e.g., walkability, parks, food deserts) affect these healthy behaviors and therefore have an impact on the development of chronic conditions.

Below, we present self-reported information about adults' health status on chronic conditions from the BRFSS. We examine the chronic conditions described in Figure 3.3. Of note, we describe the prevalence of mental health and substance use disorders within their own sections later in this chapter. We compare rates in Prince George's County to nearby jurisdictions and also compare rates within Prince George's County by subgroup. Specifically, we compare rates across demographic categories: age group, sex, race/ethnicity. Additionally, we compare rates across socioeconomic characteristics (educational attainment and household income) and having a personal doctor. We offer these comparisons across socioeconomic characteristics because research suggests that adults with more education are healthier than adults with less education, and adults with higher incomes are healthier than adults with lower incomes

(Ettner, 1996; Zimmerman, Woolf, & Haley, 2015). Further, we present results stratified for adults with and without a personal doctor because access to primary health care and having a medical home is a known challenge in the County Assessment (Prince George's County Health Department, 2019b).

Figure 3.3.
Descriptions of Chronic Conditions

Condition	Description	Prevention & Treatment
Arthritis	<ul style="list-style-type: none"> Inflammation of joint tissue, causing pain and stiffness. Prevalence: About 23 percent of adults in the United States have diagnosed arthritis, with prevalence increasing in older age.* 	<ul style="list-style-type: none"> Healthy diet and regular exercise can help prevent arthritis, but may be unavoidable. Medications, physical therapy, or surgery can reduce symptoms.
Asthma	<ul style="list-style-type: none"> Chronic disease of the lungs causing inflammation of the airways, making it difficult to breathe. Prevalence: About 8 percent of adults and 8 percent of children in the United States currently have asthma.* 	<ul style="list-style-type: none"> Cannot be prevented. Symptoms are managed with inhalers and oral steroids.
Cardiovascular disease	<ul style="list-style-type: none"> Describes group of conditions related to the heart and blood vessels (e.g., heart attack, stroke, hypertension). Prevalence: Leading cause of death in the United States. About 47 percent of adults have risk factors for it. 	<ul style="list-style-type: none"> Prevention and treatment include avoiding risk factors of smoking, unhealthy diet, and lack of exercise. Medication can also be prescribed.
COPD	<ul style="list-style-type: none"> Chronic obstructive pulmonary disease refers to inflammatory diseases that cause obstructed airflow from the lungs and can damage lung tissue. Prevalence: About 13 percent of adults in the United States.** 	<ul style="list-style-type: none"> Inhalers and oral steroids can help with symptom management.
Diabetes	<ul style="list-style-type: none"> Group of diseases that cause too much sugar to enter the blood stream. Prevalence: About 15 percent of adults in the United States.*** 	<ul style="list-style-type: none"> Type I is not preventable. Type II prevention (and treatment) includes exercise, weight management, and a healthy diet. Treatments for both include insulin intake and blood sugar monitoring.
High cholesterol	<ul style="list-style-type: none"> High amounts of LDL cholesterol can reduce blood flow and increase risk of cardiovascular disease. Prevalence: About 12 percent of adults in the United States.*** 	<ul style="list-style-type: none"> Prevention and treatment include healthy diet (avoiding saturated fats), regular exercise, avoiding smoking and alcohol. Medication can also be prescribed.
Hypertension	<ul style="list-style-type: none"> High blood pressure above 130/80, which increases risk of heart attack and stroke. Prevalence: About 33 percent of adults in the United States.*** 	<ul style="list-style-type: none"> Prevention and treatment include healthy diet (avoiding saturated fats), regular exercise, avoiding smoking and alcohol. Medication can also be prescribed.

NOTES: *Prevalence estimates from the National Health Interview Survey. **Prevalence estimates from the BRFSS. ***Prevalence estimates from the National Health and Nutrition Examination Survey.

In 2017, County adults had similar self-rated health as other jurisdictions and the state (Table 3.5). However, County adults had higher rates of cardiovascular disease and diabetes than the state and nearby counties.

Table 3.5.
Self-Reported Health Status for Adults, by Jurisdiction, 2017

Measure	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
Self-rated health: Excellent, very good, or good	83.8	83.8	93.8	86.5	84.9
Diagnosed arthritis	23.4	23.5	19.4	16.1	22.9
Diagnosed asthma	9.6	11	8.7	6.6	9.7
Diagnosed COPD	6.1	6.9	3.2	3.2	5.3
Diagnosed hypertension	31.9	32.1	24.5	25.3	30.6
Diagnosed cardiovascular disease	8.7	6.8	4.4	3.8	7.0
Diagnosed diabetes	12.3	9.1	7.3	7.5	9.6
Diagnosed high cholesterol	27.6	27.4	29.5	31.9	29.0

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. Diagnosed hypertension excludes borderline hypertension and women diagnosed only during pregnancy. Diagnosed cardiovascular disease includes coronary heart disease, heart attack, and stroke. Diagnosed diabetes excludes women diagnosed only during pregnancy. COPD, chronic obstructive pulmonary disease.

In 2017, more than half of adults aged 65 years and older in the County reported having arthritis and high cholesterol and 70 percent had hypertension (Tables 3.6 and 3.7). Adults without a personal doctor were less likely to rate their health as excellent, very good or good.

Table 3.6.
Self-Reported Health Status for Adults in Prince George's County, 2017

	Self-rated health: excellent, very good, or good	Diagnosed Arthritis	Diagnosed Asthma	Diagnosed COPD
Overall	83.8	23.4	9.6	6.1
Demographics				
Age group*				
18 - 64	86.5	17.6	9.4	4.2
65 and older	71.2	55.4	9.8	16.3
Sex				
Female	83.8	26.7	12.6	6.0
Male	84.1	20.2	5.8	6.4
Race				
White, non-Hispanic	90.0	23.0	9.1	NA
Black, non-Hispanic	86.2	23.4	11.1	5.1
Hispanic	71.3	29.6	NA	NA
Socioeconomic characteristics				
Educational attainment				
Above high school	89.2	20.7	11.3	4.3
High school or less	75.7	28.4	7.7	10.0
Household income				
\$50k and above	93.6	23.2	12.6	2.6
Below \$50k	71.0	25.1	8.5	10.5
Has a personal doctor				
Has a personal doctor	86.9	24.0	11.7	5.9
No personal doctor	73.1	22.3	NA	NA

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size. COPD, chronic obstructive pulmonary disease.

In 2017, Black and Hispanic adults reported higher rates of hypertension and diabetes than White adults (Table 3.7). Adults without a personal doctor had lower rates of diagnosed hypertension and diagnosed high cholesterol than adults with a personal doctor, however, rather than reflecting better health, this may be reflecting lack of a diagnosis due to poor access to medical care. For example, undiagnosed hypertension has been identified as a problem among immigrants in the United States with poor access to health care (Zallman et al., 2013).

Table 3.7.
Self-Reported Health Status for Adults in Prince George’s County, 2017

	Diagnosed Hypertension	Diagnosed Cardiovascular Disease	Diagnosed Diabetes	Diagnosed High Cholesterol
Overall	31.9	8.7	12.3	27.6
Demographics				
Age group*				
18 - 64	25.0	5.9	9.4	24.8
65 and older	70.0	22.9	28.7	51.3
Sex				
Female	31.1	7.3	12.0	29.3
Male	32.8	10.6	13.0	26.1
Race				
White, non-Hispanic	28.3	9.5	10.5	36.0
Black, non-Hispanic	34.2	7.3	13.6	26.1
Hispanic	34.6	18.4	16.7	31.3
Socioeconomic characteristics				
Educational attainment				
Above high school	30.5	7.1	12.3	26.0
High school or less	35.2	11.3	12.8	31.0
Household income				
\$50k and above	32.9	7.0	10.7	26.7
Below \$50k	30.8	10.7	15.3	29.1
Has a personal doctor				
Has a personal doctor	32.5	7.8	13.0	28.9
No personal doctor	27.5	NA	NA	23.1

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size. Diagnosed hypertension excludes borderline hypertension and women diagnosed only during pregnancy. Diagnosed cardiovascular disease includes coronary heart disease, heart attack, and stroke. Diagnosed diabetes women diagnosed only during pregnancy.

Cancer Screening, Incidence, and Mortality

In this section, we describe rates of cancer screening, incidence, and mortality. Cancer screening can facilitate early diagnosis of cancer, which is important because cancers that are detected earlier may be easier to treat and therefore have lower mortality. Despite the benefits of early detection, barriers to cancer screening persist, including lack of a usual medical provider, lack of insurance, inaccurate perception of cancer risk, and general fear of a cancer diagnosis (Guesous et al., 2010; Young & Severson, 2005). Known behavioral risk factors for cancer include smoking, excessive drinking, lack of exercise, and obesity (National Cancer Institute, 2019).

Below, we present self-reported information about cancer screening for adults using the 2016 BRFSS, the most recent version of the survey to capture information about cancer screening. We compare screening rates in Prince George’s County to nearby jurisdictions and also compare rates within Prince George’s County by subgroup. Specifically, we compare rates by race/ethnicity, socioeconomic characteristics (educational attainment and household income), and having a personal doctor. Then, we use data from the Maryland Cancer Prevention, Education, Screening and Treatment Program to describe cancer incidence and mortality by site, over time, and by jurisdiction.

Cancer screening

In 2016, Prince George’s County had slightly higher cancer screening rates compared to the state for prostate, colorectal, and breast cancers, and slightly lower screening rate for cervical cancer (Table 3.8).

Table 3.8.
Self-Reported Cancer Screening for Adults in Prince George’s County, 2016

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Mammogram in last 2 years, women aged 50 and older*	82.8	76.3	85.2	77.6	79.2
Pap smear in last 3 years, women aged 21 - 65*	77.2	80.0	76.4	82.9	80.6
Colorectal cancer screening, men and women aged 50 - 75	70.5	71.2	67.7	70.2	69.7
PSA test in last 2 years, men aged 40 and older	41.4	39.5	37.7	37.2	38.1

SOURCE: Maryland Department of Health Query System, 2017.

NOTES: All rates are age-adjusted unless otherwise indicated. PSA, Prostate-Specific Antigen test. *Indicates crude rate.

Table 3.9 compares cancer screening rates for subgroups within Prince George’s County. Black men and women had higher rates of cancer screening than White residents. Rates of cancer screening were lower among populations with less education, lower household incomes, and those without a personal doctor.

Table 3.9.
Self-Reported Cancer Screening for Adults in Prince George’s County, 2016

	Mammogram in last 2 years, women aged 50 and older*	Pap smear in last 3 years, women aged 21 - 65*	Colorectal cancer screening, men and women aged 50 - 75	PSA test in last 2 years, men aged 40 and older
Overall	82.8	77.2	70.5	41.4
Demographics				
Race				
White, non-Hispanic	67.9	68.6	66.1	36.7
Black, non-Hispanic	89.6	83.0	72.2	45.6
Hispanic	NA	67.9	NA	NA
Socioeconomic characteristics				
Educational attainment				
Above high school	83.4	80.7	74.0	42.5
High school or less	81.2	70.1	62.5	39.6
Household income				
\$50k and above	83.0	84.9	77.0	45.3
Below \$50k	80.8	68.1	55.9	33.9
Has a personal doctor				
Has a personal doctor	83.1	79.9	74.8	46.2
No personal doctor	NA	58.2	23.9	NA

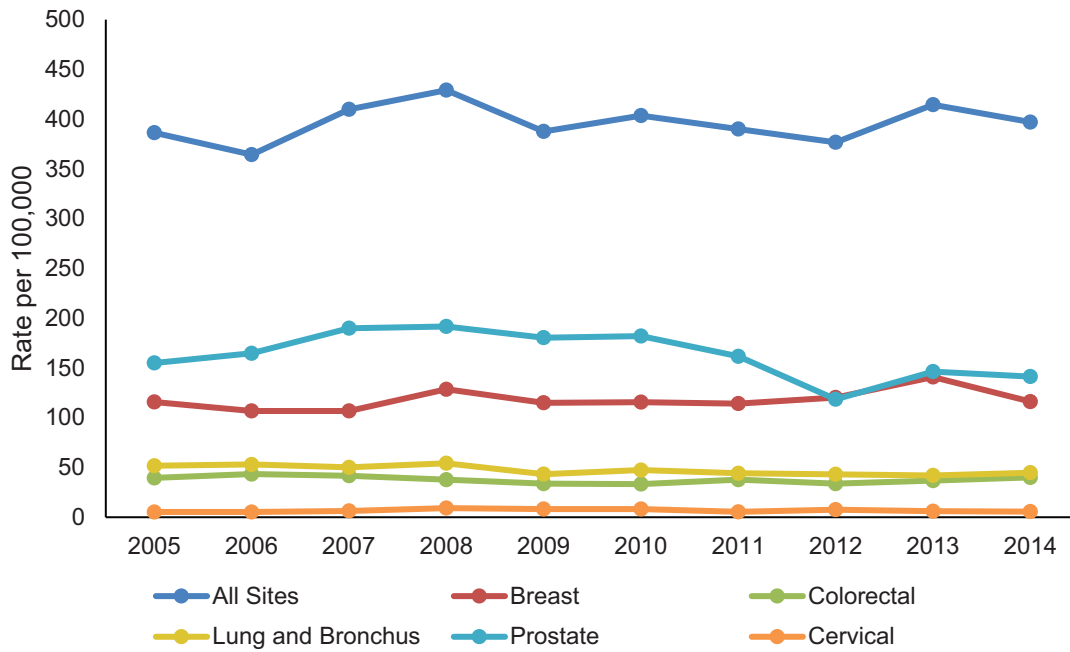
SOURCE: Maryland Department of Health Dataset Query System, 2016.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size. PSA, Prostate-Specific Antigen test.

Cancer Incidence

Figure 3.4 illustrates cancer incidence over time in Prince George’s County by site of where the cancer developed. Of note, age-adjusted rates of prostate cancer in Prince George’s County reached a low of 118.5 per 100,000 in 2012, however, rates increased to 141.3 per 100,000 in 2014. Additionally, breast cancer incidence declined from 140.9 per 100,000 in 2013 to 116.2 per 100,000 in 2014.

Figure 3.4.
Cancer Age-Adjusted Incidence Rates per 100,000 by Site, Prince George’s County, 2005–2014



SOURCE: Maryland Cancer Prevention, Education, Screening and Treatment Program, 2017.
 NOTES: 2006 incidence rates are lower than actual due to case underreporting.

When comparing cancer incidence in Prince George’s County to Maryland and the United States (Table 3.10), we find that overall rates were comparatively lower in Prince George’s County (396.5 per 100,000). However, incidence of prostate cancer was considerably higher in Prince George’s County (149.2 per 100,000) than rates observed in Maryland (125.4 per 100,000) or the United States (116.1 per 100,000).

Table 3.10.
Cancer Age-Adjusted Incidence Rates per 100,000 Population by Site, 2010–2014

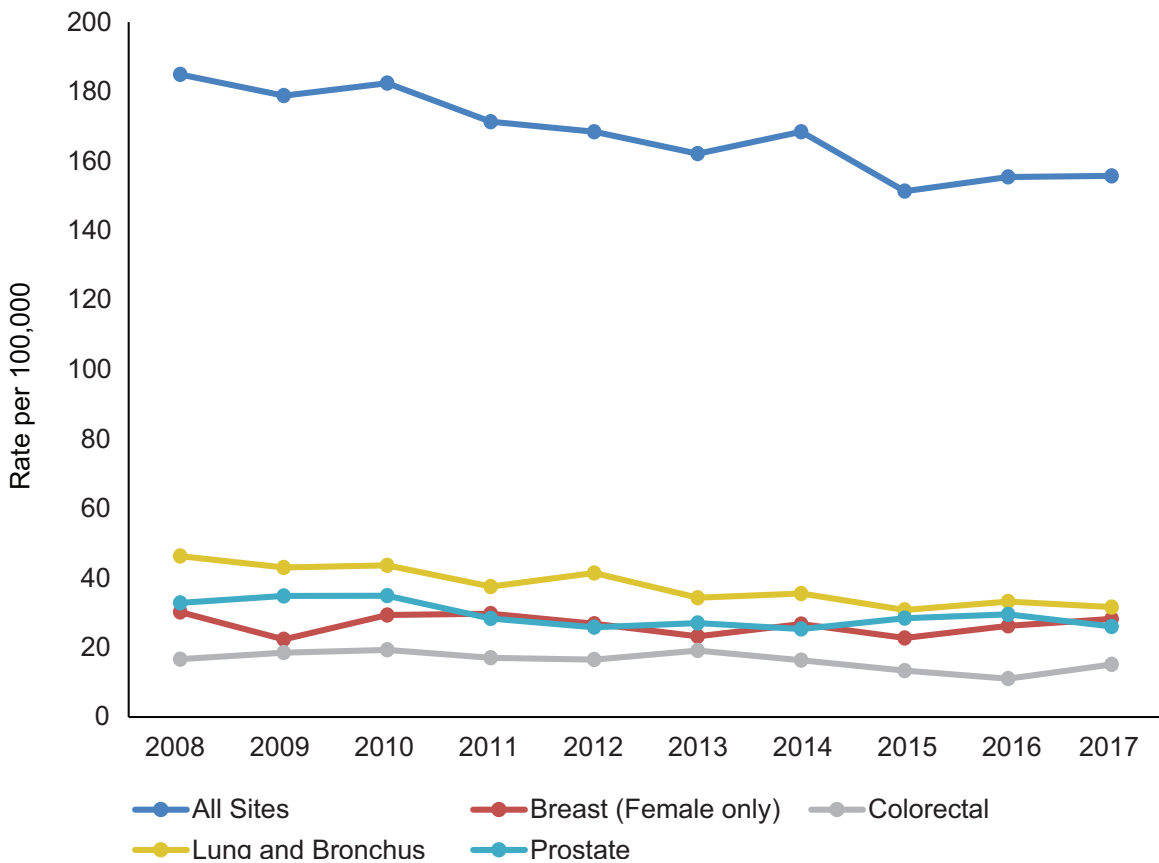
Site	Prince George’s	Maryland	United States	HP 2020 Goal
All Sites	396.5	443.4	454.9	*
Breast (Female)	121.7	129.2	124.1	*
Colorectal	36.3	36.7	40.0	39.9
Male	42.8	41.8	46.0	*
Female	31.6	32.7	34.9	*
Lung and Bronchus	44.2	56.6	61.5	*
Male	52.7	64.6	73.0	*
Female	38.0	50.7	52.9	*
Prostate	149.2	125.4	116.1	*
Cervical	6.6	6.4	7.6	7.2

SOURCE: Maryland Cancer Prevention, Education, Screening, and Treatment Program, 2017.
 NOTES: Raw data obtained from National Center for Health Statistics CDC WONDER Online Database. HP 2020 Goal, indicates the Healthy People 2020 goal which serves as a federal benchmark for improving health. *No HP 2020 goal specified.

Cancer Mortality

Figure 3.5 illustrates cancer mortality rates over time in Prince George’s County by site of where the cancer developed. Of note, the breast cancer mortality rate increased from 22.7 per 100,000 in 2015 to 25.8 in 2017. Higher cancer mortality rates could be driven by poorer access to timely health care, which leads to delays in diagnosis and treatment.

Figure 3.5.
Cancer Age-Adjusted Mortality Rates per 100,000 by Site, Prince George’s County, 2008–2017



SOURCE: Maryland Cancer Prevention, Education, Screening, and Treatment Program, 2017.

NOTES: Raw data obtained from National Center for Health Statistics WONDER Online Database. Cervical cancer statistics not included due to insufficient numbers.

When comparing cancer mortality rates in Prince George’s County to Maryland and the United States (Table 3.11), we find that mortality rates for breast cancer, cervical cancer, and prostate cancer are higher in Prince George’s County than in Maryland and the United States.

Table 3.11.
Cancer Age-Adjusted Mortality Rates per 100,000 by Site and Sex, Pooled 2015–2017

Site	Prince George’s	Maryland	United States	HP 2020 Goal
All Sites	154.1	154.3	155.5	161.4
Breast (Female)	25.8	21.5	20.1	20.7
Colorectal	13.2	13.19	13.9	14.5
Male	16.5	16.3	16.5	*
Female	10.9	12.0	11.9	*
Lung and Bronchus	31.9	37.0	38.5	45.5
Male	38.0	44.1	46.8	*
Female	27.3	31.8	32.0	*
Prostate	27.9	20.3	20.3	21.8
Cervical	2.6	1.9	1.9	2.2

SOURCE: Maryland Cancer Prevention, Education, Screening, and Treatment Program, 2017.

NOTES: HP 2020 Goal, indicates the Healthy People 2020 goal which serves as a federal benchmark for improving health. *No HP 2020 goal specified.

Disability

The CDC defines disability as “any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions)” (Centers for Disease Control and Prevention, 2019). This expansive definition identifies a broad group of individuals with diverse health needs. Research suggests that individuals with disabilities encounter unique barriers to health care, including inadequate accommodations such as those for patients who are deaf, offices that are inaccessible or lack adaptive equipment, and providers’ misconceptions about people with disabilities (Drainoni et al., 2006).

Below, we present self-reported information about the disability status of adults from the BRFSS. We compare rates in Prince George’s County to nearby jurisdictions and also compare rates within Prince George’s County by subgroup. Specifically, we compare rates by demographics, socioeconomic characteristics, and having a personal doctor.

In 2017, nearly one in four adults in Prince George’s County reported having one or more disabilities (Table 3.12). Adults most commonly reported mobility disabilities (13.2 percent) and cognitive disabilities (8.5 percent). Women were more likely than men to report having any disability, and men were more likely to report having a hearing disability. Disabilities were more common among adults with less education and adults in households with incomes less than \$50,000. The County had higher rates of adults with disabilities compared to the state and neighboring counties, driven primarily by having higher rates of adults with mobility disabilities.

Table 3.12.
Self-Reported Disability Status for Adults, by Jurisdiction, 2017

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
Has one or more disabilities	24.0	21.3	14.8	16.4	21.7
Type of disability					
Vision	5.0	3.0	NA	2.5	3.6
Cognitive	8.5	10.6	NA	5.8	8.9
Mobility	13.2	10.8	6.5	7.2	10.6
Self-Care	4.3	3.7	NA	1.7	3.0
Independent living	6.0	6.9	NA	3.5	5.7
Hearing	4.9	3.2	3.5	4.8	4.8

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated.

Table 3.13 compares disability rates for subgroups within Prince George's County. Hispanic adults reported the highest rate of disabilities overall (42.1 percent) and had the highest rate of mobility disabilities (27.1 percent). Reporting a mobility disability was more common among adults who were less educated and lived in lower income households.

Table 3.13.
Self-Reported Disability Status for Adults in Prince George's County, 2017

	Has one or more disabilities	Type of Disability					
		Vision	Cognitive	Mobility	Self-Care	Independent living	Hearing
Overall	24.0	5.0	8.5	13.2	4.3	6.0	4.9
Demographics							
Age group*							
18-64	21.6	4.5	8.9	10.5	3.3	4.8	4.4
65 and older	36.1	NA	5.2	26.7	NA	12	7.2
Sex							
Female	26.8	NA	12.2	16.1	NA	6.5	2.5
Male	20.8	NA	NA	9.8	NA	5.3	7.2
Race							
White, non-Hispanic	23.8	NA	11.3	7.9	NA	NA	NA
Black, non-Hispanic	20.5	NA	7.0	11.3	3.5	4.4	2.1
Hispanic	42.1	NA	NA	27.1	NA	18.9	NA
Socioeconomic characteristics							
Educational attainment							
Above high school	16.3	NA	4.3	9.1	NA	4.5	3.3
High school or less	36.8	9.7	13.9	20.1	7.1	7.8	NA
Household income							
\$50k and above	13.9	NA	NA	7.5	NA	NA	NA
Below \$50k	37.2	NA	13.0	21.5	7.3	9.1	NA

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size.

Mental Health

Mental health is the term used to describe overall psychological well-being. It is key to overall health as it affects personal relationships, response to stress, and decision-making. Mental health conditions can be diagnosed (e.g., depression, anxiety, bipolar disorder, or schizophrenia) and may be acute or chronic. Additionally, mental health conditions are common, as more than half of individuals will be diagnosed with one during their lifetime (Kessler et al., 2007) and one in 25 Americans has a serious mental illness (Bose et al., 2016).

Below, we present self-reported information about adult mental health from the BRFSS. We compare rates in Prince George’s County to nearby jurisdictions and also compare rates within Prince George’s County by subgroup. Specifically, we compare rates by demographics, socioeconomic characteristics, and having a personal doctor. Additionally, we present self-reported information on bullying experiences and suicidality among adolescents and teens from the Youth Tobacco and Risk Behavior Survey. We use this survey to present trends over time in the County and to compare rates in the County and the state. Information about health care utilization related to mental health, including emergency department visits and hospitalizations, is included in the next chapter.

In 2017, self-reported indicators of the mental health burden for adults in Prince George’s County were lower than compared to the state and nearby counties; that is, fewer adults in the County reported being diagnosed with depressive disorder than in other nearby counties or the state (Table 3.14).

Table 3.14.
Self-Reported Mental Health for Adults, by Jurisdiction, 2017

Measure	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Diagnosed depressive disorder	10.1	19.3	14.3	16.8	17.9
Reported days of “not good” mental health past 30 days					
8 to 29 days	8.8	9.1	7.5	10.1	10.1
30 days	3.9	6.2	NA	3.0	5.4

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. NA, indicates the rate was not available due to small sample size.

When examining the self-reported mental health of adults by subgroup within the County, White and Hispanic adults were more likely to report more days of “not good” mental health (Table 3.15). Additionally, rates of diagnosed depressive disorder were higher among individuals with household incomes less than \$50,000.

Table 3.15.
Self-Reported Mental Health for Adults in Prince George’s County, 2017

	Diagnosed depressive disorder	Reported days of “not good” mental health past 30 days	
		8 to 29 days	30 days
Overall	10.1	8.8	3.9
Demographics			
Age group*			
18-64	9.6	8.7	4.1
65 and older	13.0	8.8	NA
Sex			
Female	14.0	11.0	3.2
Male	5.8	6.6	4.7
Race			
White, non-Hispanic	19.0	17.1	NA
Black, non-Hispanic	9.0	8.9	3.5
Hispanic	17.7	NA	NA
Socioeconomic characteristics			
Educational attainment			
Above high school	10.6	9.5	3.6
High school or less	10.4	8.1	NA
Household income			
\$50k and above	6.6	7.5	NA
Below \$50k	16.1	10.2	NA

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size.

In 2016, the rates of students seriously considering suicide were 23.5 percent for middle school students and 17.7 percent for high school students in the County (Table 3.16). These rates were higher than the state average and higher than the County rates in 2014. Almost one in three high school students reported feeling sad or hopeless frequently, which was slightly higher than the state average in that same year (29.9 percent) and higher than the County rate in 2014 (26.8 percent). Regarding bullying, almost one in four middle school students in the County reported being bullied on school property; comparatively, bullying was reported by fewer high school students (14.5 percent). Rates of reported bullying were lower in the County than the state averages.

Table 3.16.
Percentage of Middle School and High School Students Reporting Bullying and Suicidality,
Prince George’s County and Maryland, 2013–2016

	2013		2014		2016	
	PG	MD	PG	MD	PG	MD
Suicidality						
<i>Middle School</i>						
Tried to kill themselves	+	+	+	+	11.5	8.5
Seriously thought about killing themselves	24.7	19.1	22.5	17.6	23.5	21.3
<i>High School</i>						
Seriously considered attempting suicide	17	16	14.7	15.9	17.7	17.3
Felt sad or hopeless frequently	29.8	27	27.3	26.8	31.5	29.9
Bullying						
<i>Middle School</i>						
Been bullied on school property	36.6	43	37	40.9	24.1	28.2
Been electronically bullied	14.7	19.4	16	19.7	13.3	15.4
<i>High School</i>						
Been bullied on school property	15.9	19.6	17.7	17.7	14.5	18.2
Been electronically bullied	10.7	14.0	9.9	13.8	10.5	14.1

SOURCE: Maryland Department of Health Dataset Query System, 2017b.

NOTES: Data obtained from the YRBS/YTS. + Indicates data unavailable.

Substance Use Disorder

Substance use disorder refers to the dependence on drugs or alcohol that leads to clinical and functional impairments. Individuals dependent on drugs or alcohol experience health problems and often struggle to meet basic responsibilities at school, work, or home. Thus, families, as well as individuals, experience negative consequences. In 2017, more than one in ten Americans aged 12 years and older used an illicit drug in the past month (National Center for Health Statistics, 2018). Co-occurring mental illness and substance use disorders are common, with 9.2 million U.S. adults diagnosed with both in 2018 (Substance Abuse and Mental Health Services Administration, 2019).

Below, we present self-reported information about various forms of substance use. First, we summarize findings on binge drinking by adults, using BRFSS data. We compare rates in Prince George’s County to nearby jurisdictions and also compare rates within Prince George’s County by subgroup. Then, we use data from the Maryland Department of Health to describe drug and alcohol-related intoxication deaths over time in the County and state by type of drug. Additionally, we use data from the Prince George’s County Fire and Emergency Medical Services (EMS) Department counts of EMS responses for overdoses and use of Naloxone to reverse opioid overdoses, specifically. Information about health care utilization related to substance use, including emergency department visits and hospitalizations, is included in the next chapter on health care services.

In 2017, 12.8 percent of adults in Prince George’s County reported binge drinking, which is lower than the rates in nearby counties and the state (Table 3.17). Rates of binge drinking were higher for men and higher for White and Hispanic adults compared to Black adults. Rates of binge drinking were higher among more educated adults and adults with higher incomes (Table 3.18).

Table 3.17.
Self-Reported Binge Drinking by Adults, by Jurisdiction, 2017

	Prince George’s	Baltimore County	Howard County	Montgomery County	Maryland
Binge drinking	12.8	17.8	17.4	14.2	16.4

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. Binge drinking is defined as drinking 5 or more drinks on an occasion for men or 4 or more drinks on an occasion for women.

Table 3.18.
Self-Reported Binge Drinking by Adults in Prince George’s County, 2017

	Binge Drinking
Overall	12.8
Demographics	
Age group*	
18-64	14.6
65 and older	NA
Sex	
Female	9.7
Male	16.2
Race	
White, non-Hispanic	17.3
Black, non-Hispanic	10.9
Hispanic	19.5
Socioeconomic characteristics	
Educational attainment	
Above high school	14.1
High school or less	12.5
Household income	
\$50k and above	15.1
Below \$50k	13.0
Has a personal doctor	
Has a personal doctor	13.2
No personal doctor	15.1

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. Binge drinking is defined as drinking 5 or more drinks on an occasion for men or 4 or more drinks on an occasion for women. *Indicates crude rate. NA, indicates the rate was not available due to small sample size.

Drug and alcohol-related intoxication deaths are increasing in Prince George’s County and in Maryland (Table 3.19). Drug and alcohol-related intoxication deaths in Prince George’s County increased from 53 in 2007 to 167 in 2017, representing an increase of 215 percent (Figure 3.6). Opioid-related intoxication deaths are a leading cause of overall intoxication deaths. Opioid-related intoxication deaths increased from 27 in 2007 to 124 in 2017, representing an increase of 359 percent. Fentanyl-related intoxication deaths (fentanyl is a deadly opioid synthetic) were relatively rare before 2015 (accounting for fewer than 10 deaths per year) but increased to 103 deaths in 2017.

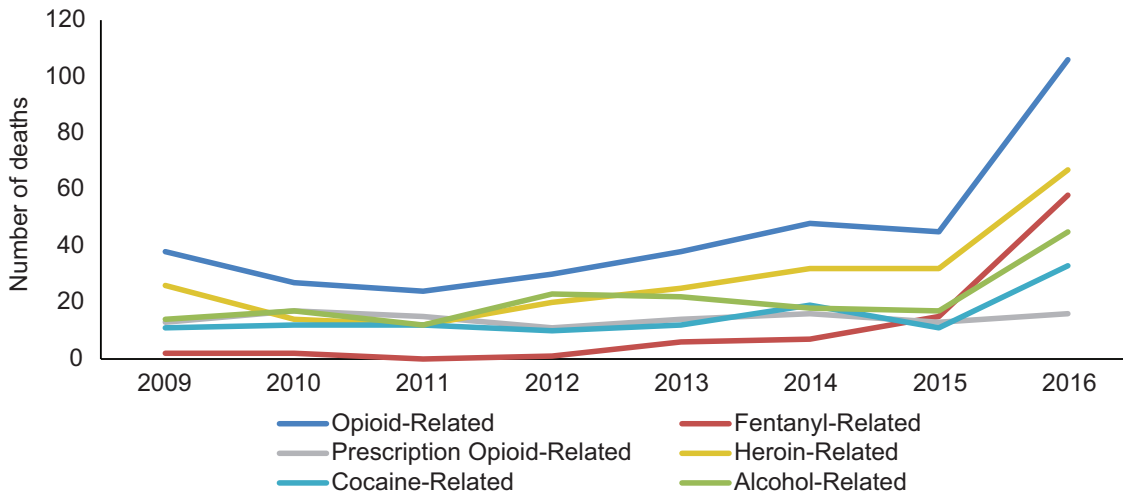
Table 3.19.
Drug and Alcohol-Related Intoxication Deaths in Prince George’s County and in the Entire State of Maryland, 2007–2018 and up to March 2019

	Drug and Alcohol-Related		Opioid-Related		Fentanyl-Related		Heroin-Related	
	PG	MD	PG	MD	PG	MD	PG	MD
2007	53	815	27	628	1	26	20	399
2008	58	694	33	523	0	25	24	289
2009	59	731	38	570	2	27	26	360
2010	43	649	27	504	2	39	14	238
2011	42	671	24	529	0	26	12	247
2012	56	799	30	648	1	29	20	392
2013	59	858	38	729	6	58	25	464
2014	63	1,041	48	888	7	186	32	578
2015	70	1,259	45	1,089	15	340	32	748
2016	129	2,089	106	1,856	58	1,119	67	1,212
2017	167	2,282	124	2,009	103	1,594	52	1,078
2018*	127	2,420	94	2,144	75	1,888	44	831
2019 YTD*	21	577	14	515	14	474	7	188

SOURCE: Maryland Department of Health, 2019b.

NOTES: Includes deaths that were the result of recent ingestion or exposure to alcohol or another type of drug, including heroin, cocaine, prescription opioids, benzodiazepines, and other prescribed and unprescribed drugs. Includes only deaths for which the manner of death was classified as accidental or undetermined. *Counts for 2018 and 2019 are not complete.

Figure 3.6.
Drug and Alcohol-Related Intoxication Deaths in Prince George’s County, Maryland, 2007–2017



SOURCE: Maryland Department of Health, 2019b.

NOTES: Includes deaths that were the result of recent ingestion or exposure to alcohol or another type of drug, including heroin, cocaine, prescription opioids, benzodiazepines, and other prescribed and unprescribed drugs. Includes only deaths for which the manner of death was classified as accidental or undetermined.

The number of EMS responses for overdoses declined slightly from 1,054 in 2017 to 1,004 in 2018 (Table 3.20). This decline was primarily driven by a decline in District 6, a district that reported 36 fewer EMS responses for overdoses from 2017 to 2018.

Table 3.20.
EMS Responses for Overdoses in Prince George’s County, by District and Year

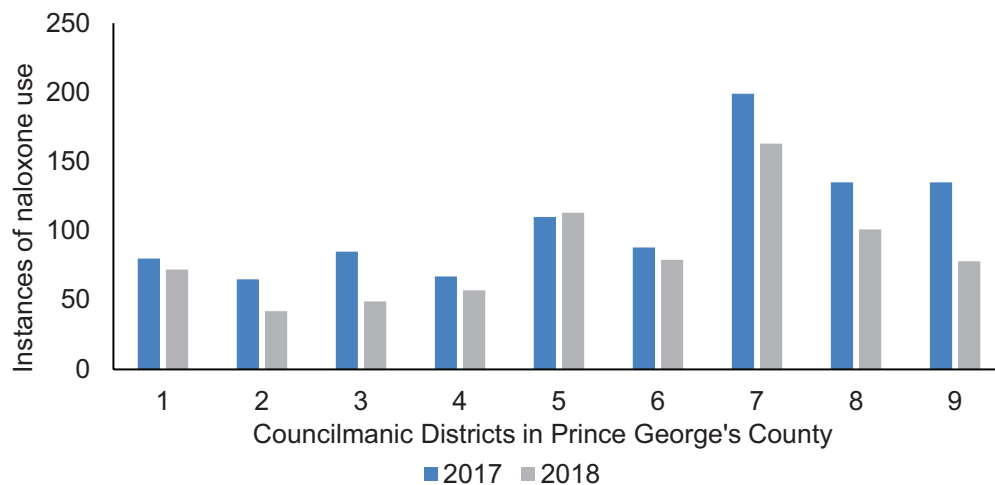
	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
2017	1,054	106	85	145	93	111	127	168	119	94
2018	1,004	90	105	132	84	122	91	151	125	104

SOURCE: Prince George’s County Fire and Emergency Medical Services Department, 2019.

NOTES: Data was provided by the Fire and Emergency Medical Services Department and is not available publicly.

Naloxone is used to reverse an opioid overdose. Use of naloxone by the Prince George’s County Fire and EMS Department declined from 974 in 2017 to 754 in 2018. All districts experienced a decline in use of naloxone by the Fire and EMS Department, except District 5, which had a slight increase from 110 in 2017 to 113 in 2018 (Figure 3.7).

Figure 3.7.
Naloxone Use in Prince George's County, by District and Year



SOURCE: Prince George's County Fire and Emergency Medical Services Department, 2019.

NOTES: Data was provided by the Fire and Emergency Medical Services Department and is not available publicly.

Sexual health

The numbers of cases of chlamydia, gonorrhea and syphilis in Prince George's County have increased over time (Table 3.21). Chlamydia is the most common bacterial sexually transmitted infection in the United States, and Prince George's County. Chlamydia can cause negative outcomes, including tubal infertility, ectopic pregnancy, pelvic inflammatory disease, and chronic pelvic pain (Genius & Genius, 2004). Across Maryland, the highest rates of chlamydia per 100,000 population were observed in Baltimore City (1,189), Somerset (877.1), and Prince George's (742.5) (Table 3.22).

Table 3.21.
Number of Sexually Transmitted Infections, Prince George's County, 2015–2018

	2015	2016	2017	2018
Chlamydia	6,153	6,752	7,365	8,013
Gonorrhea	1,282	1,832	2,001	2,020
Syphilis*	81	110	143	153

SOURCE: Maryland Department of Health Infectious Disease Bureau, 2019.

NOTE: *Includes both Primary and Secondary Syphilis.

Table 3.22.
Chlamydia Infections by County, 2016

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
# Chlamydia Cases	6,753	4,190	948	3,428	30,658
Chlamydia Rate Per 100,000	742.5	504.1	302.5	329.6	510.4

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from the 2016 National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Number of newly diagnosed chlamydia cases per 100,000 population.

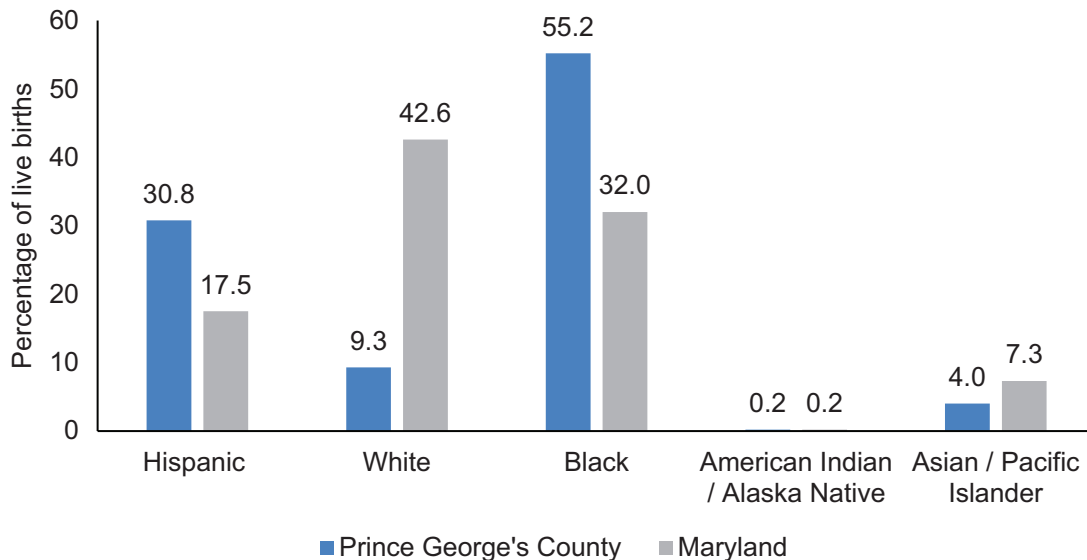
Maternal and Infant Health

There is a strong link between maternal health and perinatal health outcomes (Bhutta, Lassi, Blanc, & Donnay, 2010). For example, pregnant women who smoke or have inadequate nutrition have a higher risk of having infants with cognitive, behavioral, and physical health challenges (Bell et al., 2018). In 2019, the Prince George’s County Health Department published a comprehensive report on maternal and infant health (Prince George’s County Health Department, 2019c). As described in that report, reproductive-age women (15-44 years) comprise over one-fifth of County residents. Racial/ethnic disparities exist throughout the County for rates of pre-term deliveries, low birthweight infants, infant mortality, and maternal risk factors (e.g., obesity, diabetes, hypertension). Our findings below echo the important findings of the County’s report and provide additional information about health care access and utilization and summarize findings from the PRAMS.

Births and Birth Outcomes

As reported by the Maryland Vital Statistics Administration, in 2018 there were 12,160 live births in the County. Almost one in four births (22.5 percent) were to women aged 35 years and older. As illustrated by Figure 3.8, the majority of births in the County were to Black, non-Hispanic mothers (55.2 percent).

Figure 3.8.
Percentage of Live Births by Race/Ethnicity, 2018



SOURCE: Maryland Vital Statistics Administration, 2019.

NOTES: All race categories exclude Hispanics. Percentages will not total 100 percent since data with missing information on ethnicity are not shown.

In 2019 in Prince George’s County, 1.2 percent of births in the County were to mothers less than 18 years of age (Maryland Vital Statistics Administration, 2019). When examining pooled data from 2011–2017, the teen birth rate in Prince George’s County was higher than rates in nearby counties and the state (Table 3.23). The teen birth rate in Prince George’s County varied greatly by race/ethnicity: 56 per 1,000 for Hispanic women, 21 per 1,000 for Black women, and 6 per 1,000 for White women.

Table 3.23.
Teen Birth Rates (TBR) per 1,000, by Jurisdiction and Race/Ethnicity, Pooled 2011–2017

	Prince George’s	Baltimore	Howard	Montgomery	Maryland
Overall	24	15	7	12	19
Black (B)	21	21	13	15	*
Hispanic	56	38	30	35	*
White (W)	6	10	3	3	*
B : W TBR Ratio	3.2	2.1	4	5.6	*
H : W TBR Ratio	8.7	3.7	9.6	12.8	*

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from 2011-2017 National Center for Health Statistics Natality files. Includes number of births per 1,000 female population ages 15-19. *Data not available.

In 2018, nearly 10 percent of infants in Prince George’s County were born at a low birthweight, which was higher than the rate of nearby counties and the state (Table 3.24). Within the county, low birthweight was more common for Black infants compared to White infants (2.11 low birthweight ratio) and for Hispanic infants compared to White infants (1.36 low birthweight ratio).

Table 3.24.
Percentage Low Birthweight (LBW) Infants by County and Race/Ethnicity, 2018

	Prince George’s	Baltimore	Howard	Montgomery	Maryland
Overall	9.7	9.5	9.3	7.4	8.9
White (W)	5.5	7.6	7.3	5.9	6.8
Black (B)	11.6	13.1	13.3	9.4	12.5
Hispanic (H)	7.5	5.7	8.2	6.6	6.9
B : W LBW Ratio	2.11	1.72	1.82	1.59	1.84
H : W LBW Ratio	1.36	0.75	1.12	1.12	1.01

SOURCE: Maryland Vital Statistics Administration, 2019.

NOTES: All race categories exclude Hispanic individuals. Low birthweight is less than <2500 grams. *Percentages based on <5 events in the numerator are not presented since percentages based on small numbers are unstable.

Infant Deaths

Infant mortality rates in Maryland and Prince George’s County have declined over time. In Prince George’s County, the infant mortality rate declined from 8.7 per 1,000 live births during 2009 to 2013 to 7.9 per 1,000 live births during 2014 to 2018 (Table 3.25). However, the infant mortality rates in Maryland and Prince George’s County are still higher than the Healthy People 2020 goal of 6.0 per 1,000 live births.

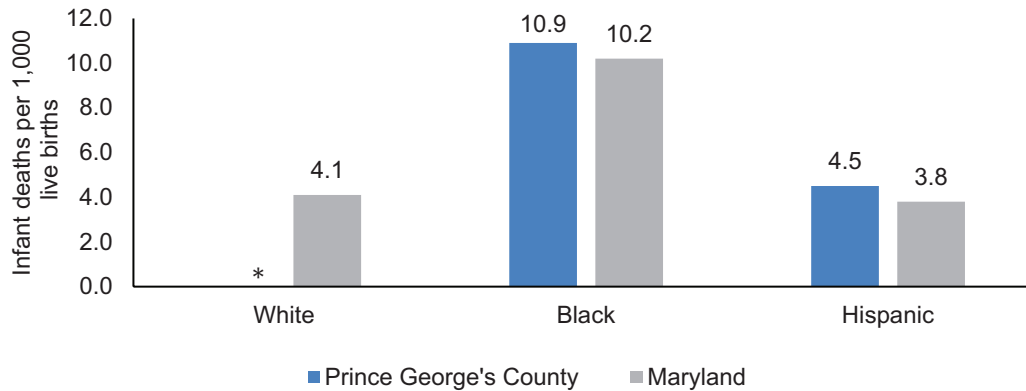
Table 3.25.
Infant Mortality Rates per 1,000 Live Births, 2009–2018

	2009 - 2013	2014 - 2018	% Change
Maryland	6.7	6.4	-4.1%
Prince George’s	8.7	7.9	-9.0%

SOURCE: Maryland Department of Health, 2018.

Large racial/ethnic differences were observed in infant mortality rates within Prince George’s County (Figure 3.9). In 2017, the infant mortality rate was 12.0 per 1,000 live births for Black mothers, 5.0 per 1,000 live births for Hispanic mothers, and fewer than 5 births total for White mothers in Prince George’s County.

Figure 3.9.
Infant Mortality Rates per 1,000 Live Births by Race/Ethnicity, 2018



SOURCE: Maryland Vital Statistics Administration, 2019.

NOTES: *Rates based on <5 deaths are not shown since rates based on small numbers are statistically unreliable.

Well-Being

Well-being encompasses the factors that describe a full and safe life, including health literacy, participation in healthy behaviors, and civic engagement. Well-being is influenced by the social, economic, built, natural, and health service environments. For example, access to safe and walkable areas makes it easier to engage in exercise. Additionally, living close to stores that sell affordable and healthy food makes it easier to maintain a healthy diet. Below, we use several data sources to describe residents’ health literacy, participation in healthy and unhealthy behaviors, and civic engagement. As noted earlier, well-being data are currently limited, a point for County consideration as it implements *Health in All Policies* in the future.

Health Literacy

Health literacy refers to “the **degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions**” (U.S. Department of Health and Human Services, 2010). Using information from the Health Literacy Component of the 2003 National Assessment of Adult Literacy, we examined within-County variation of the percentage of adults with above basic health literacy. Performance levels of health literacy, created by the National Research Council, include: below basic, basic, intermediate, and proficient. Adults with above basic health literacy (intermediate or proficient) should be able to read a pamphlet and understand two reasons why a person without symptoms should be tested for a disease. Adults should also be able to read a one-page article about a medical condition and explain how the disease could be asymptomatic (Kutner, Greenberg, Jin, & Paulsen, 2006). About half of adults in Prince George’s County

(51.7 percent) were predicted to have above basic health literacy (Table 3.26). The percentage of adults predicted to have above basic health literacy varied by district and within district, with some of the highest rates of health literacy observed in Districts 4 and 1 (Figure 3.10).

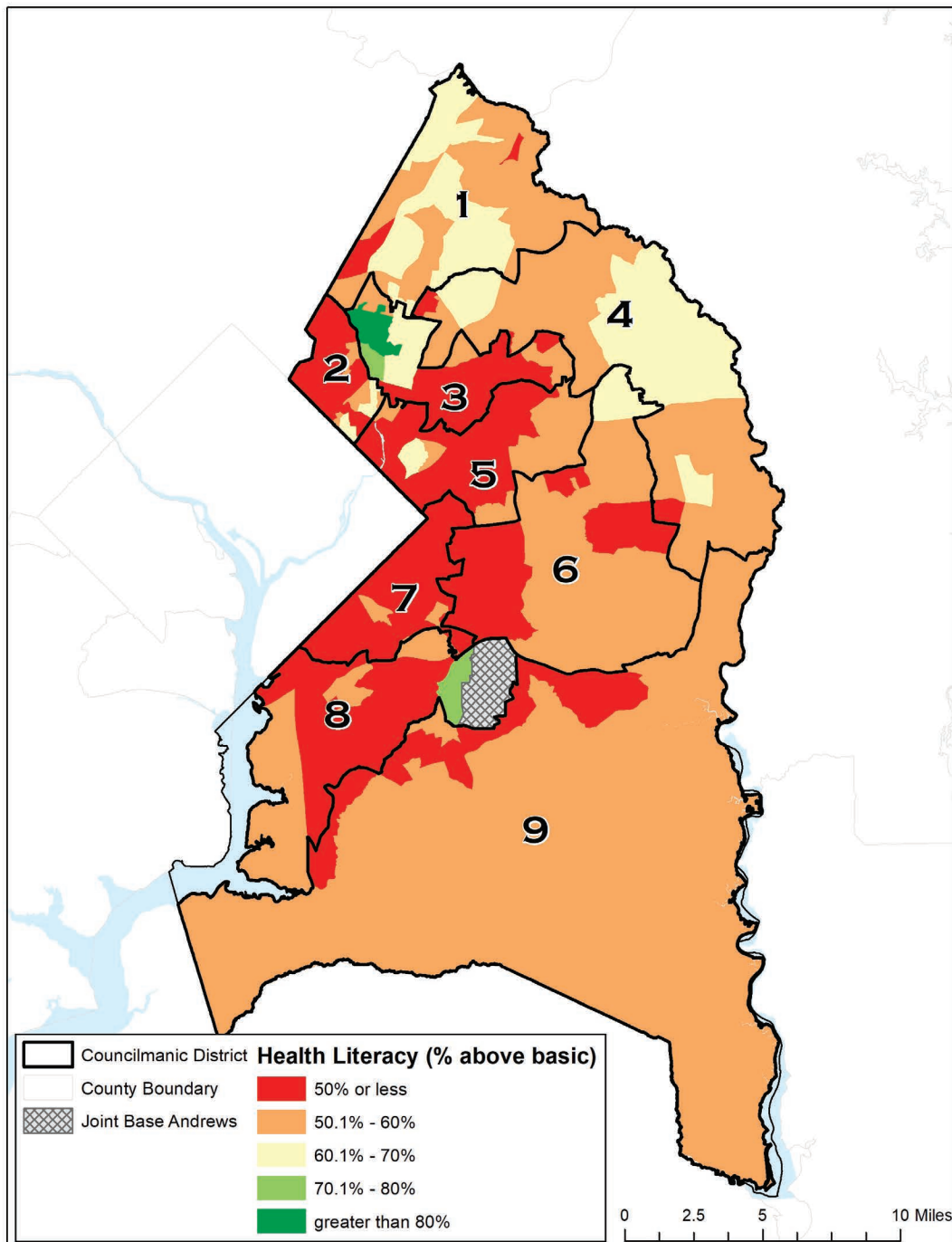
Table 3.26.
Percentage of Adults with Above Basic Health Literacy in Prince George’s County, by District

	Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
% having above “basic” estimated health literacy	51.7	55.6	45.3	54.4	59.2	47.7	51.7	46.8	50.1	52.4

SOURCES: U.S. Census Bureau, 2019b; Lurie et al., 2010.

NOTES: Estimated probability of having above basic health literacy (i.e., intermediate or proficient) using data from the American Community Survey 5-Year Summary File, 2014–2018, and the Health Literacy Component of the 2003 National Assessment of Adult Literacy, an in person assessment of English language literacy among a nationally representative sample of U.S. adults aged 18 and older. Full methods describing the modeling approach are included in the 2010 report by Lurie and colleagues (Lurie et al., 2010) and available online (<http://healthliteracymap.unc.edu>).

Figure 3.10.
Percentage of Adults with Above Basic Health Literacy in Prince George's County, by Census Tract, Pooled 2014–2018



SOURCES: U.S. Census Bureau, 2019b; Lurie et al., 2010.

NOTES: Estimated probability of having above basic health literacy (i.e., intermediate or proficient) using pooled data from the 2014–2018 American Community Survey and the Health Literacy Component of the 2003 National Assessment of Adult Literacy, an in person assessment of English language literacy among a nationally representative sample of U.S. adults aged 18 and older. Full methods describing the modeling approach are included in the 2010 report by Lurie and colleagues (Lurie et al., 2010) and available online (<http://healthliteracymap.unc.edu>).

Health Behaviors

Unhealthy behaviors, such as smoking, lack of exercise, and poor diet, contribute to poor health outcomes. For example, studies suggest that insufficient sleep is associated with negative outcomes, such as increased risk for obesity, diabetes, high blood pressure, coronary heart disease, and stroke (Liu et al., 2016). Relatedly, engagement in healthy behaviors can help to prevent poor health outcomes. For example, a healthy diet is associated with a lower risk of cancer (Grosso et al., 2017).

Below, we present self-reported information about adults’ participation in healthy and unhealthy behaviors. We compare rates in Prince George’s County to nearby jurisdictions and also compare rates within Prince George’s County by subgroup. Additionally, we present self-reported information on healthy and unhealthy behaviors of adolescents and teens from the Youth Tobacco and Risk Behavior Survey. We use this survey to present trends over time in the County and to compare rates in the County and the state.

Health Behaviors Among Adults

In 2016, 41.8 percent of adults in Prince George’s County reported insufficient sleep, which was greater than the state average of 35.6 percent (Table 3.27). Fewer adults in the County reported daily smoking (5.5 percent), compared to the state average (9.5 percent). Physical activity and diet are strong predictors of healthy weight. In 2017, almost three of four adults reported a BMI classified as overweight or obese. Half of adults in the County reported meeting aerobic recommendations of at least 150 minutes of light/moderate or 75 minutes of vigorous aerobic physical activity per week. In 2017, daily self-reported fruit-and-vegetable consumption among County adults was lower than the state average and lower than rates in Howard and Montgomery counties, and the obesity rate was considerably higher among County adults.

Table 3.27.
Self-Reported Health Behaviors for Adults, by Jurisdiction, 2017

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Insufficient sleep*	41.8	34.1	29	31.9	35.6
Tobacco use					
Smoke daily	5.5	10.1	NA	4.9	9.5
Healthy weight					
Obese (BMI 30.0+)	42.8	29.8	24.5	20.3	31.6
Physical activity					
Inactive**	25.3	27.3	19.7	23.4	27.3
Healthy eating					
Consumed fruit one or more times per day	63.2	62.0	71.9	73.7	65.4
Consumed vegetables one or more times per day	77.6	75.6	87.0	81.7	81.2

SOURCES: Maryland Department of Health Dataset Query System, 2017a; Maryland Department of Health Dataset Query System, 2016.

NOTES: All rates are age-adjusted unless otherwise indicated. *Insufficient sleep was defined as the percentage of adults who report fewer than 7 hours of sleep on average as reported in 2016. **Other categories of physical activity include highly active, active, and insufficiently active.

Rates of cigarette smoking every day and inactivity were higher among adults with less education and lower household incomes (Table 3.28). Rates of obesity were considerably higher among Black adults and among adults with less education. Daily vegetable consumption was higher among adults with more education, higher household incomes, and among those reporting a personal doctor.

Table 3.28.
Self-Reported Unhealthy Behaviors Among Adults, by Jurisdiction, 2017

	Daily smoker	Obese	Inactive*
Overall	5.5	42.8	25.3
Demographics			
Age group**			
18-64	6.0	42.8	22.5
65 and older	3.2	41.5	39.6
Sex			
Female	3.7	45.2	24.7
Male	7.0	40.8	25.5
Race			
White, non-Hispanic	9.1	30.9	21.8
Black, non-Hispanic	5.3	47.7	25.7
Hispanic	NA	34.5	26.1
Socioeconomic characteristics			
Educational attainment			
Above high school	4.1	38.7	20.4
High school or less	8.8	51.2	34.8
Household income			
\$50k and above	5.4	47.5	18.9
Below \$50k	6.0	42.2	31.9
Has a personal doctor			
Has a personal doctor	6.0	43.8	23.9
No personal doctor	NA	36.9	26.2

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. Insufficient sleep variable not available by subgroup. *Other categories of physical activity include highly active, active, and insufficiently active.

**Indicates crude rate. NA, indicates the rate was not available due to small sample size.

Table 3.29.
Self-Reported Healthy Eating by Adults, by Jurisdiction, 2017

	Consumed fruit one or more times per day	Consumed vegetables one or more times per day
Overall	63.2	77.6
Demographics		
Age group*		
18-64	62.2	77.0
65 and older	67.8	82.4
Sex		
Female	64.9	84.6
Male	60.8	69.6
Race		
White, non-Hispanic	64.0	85.2
Black, non-Hispanic	60.2	78.0
Hispanic	64.8	65.9
Socioeconomic characteristics		
Educational attainment		
Above high school	64.7	83.2
High school or less	58.2	65.9
Household income		
\$50k and above	61.5	79.2
Below \$50k	65.7	72.4
Has a personal doctor		
Has a personal doctor	62.0	81.1
No personal doctor	65.4	69.3

SOURCE: Maryland Department of Health Dataset Query System, 2017a.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate.

Living closer to parks and recreational centers may make it easier and more convenient to exercise. Using this measure of proximity to parks and other recreational facilities, we find that nearly all County residents (98 percent) have adequate access to locations for exercise opportunities (Table 3.30). This measure, however, is likely an overestimate of access to exercise opportunities in the County because it does not account for transportation barriers, which may hinder the accessibility of these locations for some, as well as safety barriers, which may also discourage individuals from engagement.

Table 3.30.
Percentage of Population with Adequate Access to Locations for Exercise Opportunities, 2018

	Prince George's	Baltimore	Howard	Montgomery	Maryland
Percentage	98	96	97	100	92

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from 2010 U.S. Census and 2018 ArcGIS Business Analyst. Individuals are considered to have access to exercise opportunities if they reside in a census block that is within a half mile of a park or an urban census block that is within one mile of a recreational facility, or a rural census block that is within three miles of a recreational facility.

Health Behaviors Among Youth

The adolescent and teenage years are an important time for developing healthy habits. In 2016, the obesity rate among high school students was 16.4 percent (Table 3.31). Few high school students reported frequently and recently eating fruits or drinking 100 percent fruit juices (17.3 percent) or eating vegetables (10.7 percent). Compared to the state average, high school students in the County were more likely to be obese and less likely to report frequent and recent physical activity.

Table 3.31.
Self-Reported Physical Activity, Prince George's County and Maryland, 2016

Measure	Prince George's County	Maryland
Healthy weight		
High school students who are obese	16.4	12.6
Physical activity		
High school students reporting they were physically active frequently and recently	25.0	35.2
Healthy eating		
Ate fruits or drank 100% fruit juices frequently and recently	17.3	15.8
Ate vegetables frequently and recently	10.7	12.0

SOURCE: Maryland Department of Health Dataset Query System, 2017b.

NOTES: Data obtained from the YRBS/YTS.

The percentage of high school students in Prince George's County reporting drinking alcohol, smoking, and using an electronic vapor product declined from 2014 to 2016 (Table 3.32). In 2016, 17 percent of County high school students reported drinking alcohol, which was lower than the state rate of 25.5 percent in 2017. Similarly, fewer high school students in the County compared to the state reported using cigarettes, cigars, or smokeless tobacco in the past month than the state (10.9 percent and 14.4 percent). Slightly fewer County students reported ever using an electronic vapor product than the state average (32.6 percent and 35.3 percent).

Table 3.32.
Percentage of High School Students Reporting Alcohol and Tobacco Use, Prince George’s County and the State of Maryland, 2013–2016

	2013		2014		2016	
	PG	MD	PG	MD	PG	MD
Alcohol use						
Had at least one drink of alcohol on one or more of the past 30 days	23.2	31.2	19.0	26.1	17.0	25.5
Tobacco use						
Used cigarettes, cigars, or smokeless tobacco in past 30 days	13.3	16.9	13.3	16.4	10.9	14.4
Currently used cigarettes, cigars, or smokeless, electronic vapor products	+	+	23.0	+	16.6	+
Ever used an electronic vapor product*	+	+	35.0	37.6	32.6	35.3
Currently use an electronic vapor product	+	+	14.9	20.0	9.0	13.3

SOURCE: Maryland Department of Health Dataset Query System, 2017b.

NOTES: Data obtained from the YRBS/YTS. + Indicates data unavailable.

Civic Engagement

As reflected in our framework (Figure 1.3), civic engagement is positively associated with overall well-being. Further, civic engagement is associated with health outcomes, including chronic disease prevalence and community health advocacy (Nelson et al., 2019). The RWJF County Health Rankings uses a count of membership associations as a proxy for social support. In 2016, Prince George’s County was ranked 19 of 24 counties in Maryland on the number of membership associations per 10,000. As described in Table 3.33, the rate of membership associations in the County was lower than nearby counties and the state.

Table 3.33.
Number of Membership Associations per 10,000 Population as a Measure of Social Associations, 2016

	Prince George’s	Baltimore	Howard	Montgomery	Maryland
# of membership associations	735	697	286	931	5,422
Rate per 10,000	8.1	8.4	9.0	8.9	9.0

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data using data obtained from the 2016 U.S. Census Bureau’s County Business Patterns. Associations include membership organizations such as civil organizations, bowling centers, golf clubs, fitness centers, or sports, religious, political, labor, business, and professional organizations.

Civic engagement can also be measured by examining vote participating in elections. More than half of registered voters turned out for the 2018 general election, which was slightly less than the statewide rate of 59.1 percent and much higher than the County’s 2014 voter turnout rate of 38.0 percent (Table 3.34).

Table 3.34.
Voter Turnout, 2010–2018

General Election	Prince George's County	Maryland
	Percent	Percent
2010	42.0	50.4
2012*	68.6	73.5
2014	38.0	44.7
2016*	68.5	72.0
2018	55.8	59.1

SOURCE: Maryland State Board of Elections, 2019.

NOTES: *Indicates presidential election.

Stakeholder Insights

In stakeholder discussions, the need for holistic health that incorporates a broader concept of health and well-being emerged. For example, stakeholders noted that improving housing and transportation can help improve connectedness to County services, which in turn can promote health and well-being. As noted earlier, residents and community leaders are seeking more support in promoting healthy lives, including health education and opportunities to promote well-being and healthy eating. Residents also noted interest in volunteerism, a key component of civic engagement and health (Nelson et al., 2019). In this section, we summarize themes related to health management and promotion in the County, health concerns for specific groups and issues, and community interest in civic engagement as part of overall well-being.

Health Management and Promotion

In the areas of health management and promotion, there was support for more health management tools, resources to promote health, and better communication and coordination about County services that support health. There were also concerns expressed for specific health conditions, such as mental and behavioral health, and concern about particular populations, such as pregnant women.

There was interest in **health self-management tools**, which stakeholders felt can be useful for promoting health, but are often inaccessible due to issues of health literacy challenges that impede the use of technology. Although a number of disease self-management tools exist, such as smartphone applications, residents shared that they often do not understand how to use them due to low health literacy or lack of understanding of the use of technology. Residents felt that educational opportunities about the use of self-management tools are often limited. The County has a number of community partners that can assist with promoting the use of such tools, including faculty at the University of Maryland School of Public Health, but it was conveyed that those services were underutilized.

As for **resources to promote health**, many stakeholders expressed a need for materials related to exercise and healthy eating. Some stakeholders shared that schools have a great deal of expertise yet are underutilized in promoting health education about healthy eating and exercise. This was particularly important for many stakeholders given the importance of establishing healthy behaviors early in life. Participants noted that lack of recess at school,

limited school gym spaces, and few places to exercise in the community contribute to the problems of childhood obesity. In addition, one participant noted that there are few options for younger children to engage in outdoor recreational activities in the community. As a result, children may spend time on relatively sedentary activities within the home, such as playing video games and watching television. The school was noted as an ideal environment for initiating approaches to address obesity. One mechanism is through the school lunch program. School lunches are perceived as offering limited healthy food options for children. Healthy meals should be accompanied by education about healthy eating behaviors in order to be most effective. Stakeholders remarked:

[A] fourth grader eats the same crap I ate 40 years ago for lunch. The high schools have a lot of junk and processed food. We need them to get hooked on better foods.

They keep building and buying townhouses without yards for kids to play in. They're playing video games inside, and it's contributing to obesity.

Our children spend 2000 hours a year in school and even more hours for our educators and support staff! What an opportunity to capitalize on creating healthy environments for all including our families in Prince George's.

Health education, particularly for healthy eating and exercise, was also noted as a concern for adults. Many stakeholders noted that there are few educational activities available that promote healthy eating. Grocery store tours and cooking classes, offered through the local community college, were thought to be helpful activities that could encourage residents to learn about healthy eating. In addition, it was noted that these classes can train enrolled students about how to operate a healthy food establishment, which may subsequently encourage them to stay in the area and invest in the development of healthy eating establishments.

One of the challenges with health management and services is the concern that **communication about County services** is limited. Residents felt that Prince George's County offers many human services that promote health through both agencies as nonprofits, such as exercise and recreational programs. However, there is a lack of information communicated to residents about such resources. There was a desire to be better informed about County services across a number of domains, including about health care resources and recreational programs. Residents shared a perception that public information officers do not communicate well with each other, so often information is not disseminated well throughout the county. Residents also felt that the County website could be improved to be more user-friendly and to better inform individuals about services.

I went to a county council meeting where organizations were providing information and requesting funding. I didn't know about a lot of these programs. Why don't they coordinate what these programs are doing?

One participant noted several examples of social media partnerships that have improved communication about county services. For example, Seat Pleasant partnered with Microsoft to get city services faster. Capitol Heights also had a web application that allows residents to find meetings and learn about crime, as well as to get updates about other relevant issues. Communication is essential to helping seniors stay connected with human services. Information about

County programs is often disseminated through social media. Seniors may be less likely to have an online presence and instead use other forms of communication, such as the newspaper, radio or television.

Health Concerns for Specific Populations and Issues

There were also populations and health issues of greatest concern with respect to health management and promotion.

Stakeholders brought up concerns about **maternal and infant health**. The 2019 Maternal and Infant Health Report from the Prince George's County Health Department (Prince George's County Health Department, 2019c) offers important insights into this topics, including:

- Compared to 2013, more mothers were obese, had diabetes, and had hypertension in 2017.
- The number of births to women aged 35 and older is increasing, from 17 percent of births in 2010 to 22 percent of births in 2017.
- Rates of newborns being breastfed increased from 82 percent in 2013 to 88 percent in 2017.

Additionally, residents and stakeholders reported a need for maternal and postpartum health services, including access to reproductive services and comfortable spaces for breastfeeding. One participant noted the lack of lactation consultants in the County. In addition, in County and other public buildings, there are few places available for breastfeeding for either visitors or employees. Of note, the 2010 Patient Protection and Affordable Care Act requires employers to provide a place, other than a bathroom, for employees to breastfeed. Additionally, the need for more accessible childcare was a concern raised by stakeholders as parents often have to obtain care for children outside of the County.

Additionally, **men's health**, such as the prevalence of chronic disease and cancer and early mortality among men, especially Black, was mentioned as a concern. Residents expressed a desire for more education and screening initiatives that specifically target men. As compared to women, men were noted to be a harder population for outreach because of lack of engagement in a number of outlets, such as the church, that traditionally encourage health promotion. Residents noted a need for engagement of community-based organizations to help provide outreach to men for diseases such as prostate and colon cancers.

I could call eight of my mom's friends who are still alive. I have fewer men to call because they're not staying around.

In the area of health issues, stakeholders were particularly concerned about **mental and behavioral health**, including among people experiencing homelessness. In data provided by DSS about people experiencing homelessness, the top barriers to permanent housing for single adults were severe mental illness and physical disability and for families they were domestic violence and severe mental illness. Stakeholders noted that many people experiencing homelessness with mental and behavioral health needs have migrated from Washington, DC, to areas in Prince George's County such as Lanham, Cheverly, and District Heights – but it was perceived that Washington, DC, has better resources available to assist people experiencing homelessness who have mental and behavioral health needs. Moreover, stakeholders noted that many of these individuals commonly have **co-occurring substance use disorders and**

co-morbid physical health conditions. Stakeholders indicated that cost is a barrier to getting care for these individuals. Additionally, one stakeholder described a perspective about the high needs of this population:

Many of these patients have high needs, like co-occurring drug addictions, victims of acute disease processes, untreated health. Also, [there is a] large anti-social population and forensic population.

Civic Engagement

A resounding theme, particularly from residents in focus groups, was the interest in civic engagement. Residents would like to be engaged in the improvement of human service needs through volunteerism. Residents recognize the sense of “village life” and community as a very positive aspect of Prince George’s County, which attracted them to live in the area. Because of this, a number of people expressed a desire to support the community through volunteerism. Volunteerism is viewed as a means for residents to contribute to the County and to help progress many of the county’s initiatives. In addition to the civic engagement associated with volunteerism, it is also thought to be a means to transition into paid positions at an organization. One participant expressed concern about the County’s shift towards “anti-volunteerism.” This is thought to be due to legal concerns that make agencies and organizations less interested in relying on volunteers. A need for more investment on how to use volunteers more effectively was cited. Examples of effective volunteer efforts include the Bowie Seniors Program, which residents feel could be expanded to give seniors more involvement.

Can't just say 'have more volunteers' It's a lot of work. I think the county, if they can find experts who have looked at volunteerism, they can look at the county and tell them how to incorporate volunteers in an efficient way.

Among **seniors**, there was interest in having County services that **foster engagement to reduce isolation and improve health**. Stakeholders explained that isolation can lead to depression which in turn leads to adverse health outcomes among seniors, yet they hoped a *Health in All Policies* approach to meeting human needs can help seniors maintain independence and stay connected with other individuals. Issues raised included the need to better understand senior needs comprehensively, have more transportation options to services, provide better supports to age in place, improve communication about senior services, and augment funding to support these services. Stakeholders noted that there are a number of programs that are offered by Prince George’s County departments to help seniors avoid social isolation. For example, there are senior centers run by the Department of Parks and Recreation that offer senior activity programs and provide balanced meals for seniors. However, getting to these programs can be challenging due to barriers to transportation, such as limited options for assisted transportation and difficulty reaching access points for bus routes. The County provides transportation to senior centers, but one stakeholder thought that this list is not regularly updated.

Many seniors can't get to centers because [the Department of Public Works and Transportation] says they are "full" but then the van shows up with just 3 or 4 people on board. If someone dies, they don't update the list...Need to get people off the waitlist.

Additional programming currently offered throughout the County includes a speaker series that utilizes senior expertise and programs run by the Department of Family Services to support seniors with dementia. For example, the Dementia Friendly American Initiative

in Prince George’s County offers “memory cafes,” which are social programs for those living with dementia and their caregivers, and other special services for seniors. Many of these programs are supported by nonprofit organizations. However, because there are fewer nonprofits in the South County, per one stakeholder, this is a barrier to offering some supportive services for seniors in that area.

Summary

An understanding of residents’ health and well-being, as well as inequities in health and well-being, is needed to better understand the role of drivers of health in shaping these outcomes. A summary of the current status of health and well-being, and how this differs across key socio-economic and demographic characteristics, also informs policy strategies to promote health and well-being.



Highlighting Key Unmet Needs

- Persistent health challenges remain for cancer, behavioral health, and conditions related to obesity. Reported risk factors for these diseases (e.g., obesity, tobacco use, lack of exercise, unhealthy diet) are more common among adults with less education.
- Large inequities for infant outcomes were observed, with Black infants having the highest rates of low birthweight and infant mortality.
- Concerns about substance abuse in District 7, where more than one in four residents are Black, which had the highest rates of EMS responses for overdoses and naloxone use in 2018.
- Challenge to fully measure well-being with existing data sources, which are more focused on the presence or absence of disease.

In this chapter, we observed positive findings and improvements in the health and well-being of Prince George’s County residents for numerous indicators. The County has a lower rate of years of potential life lost, a measure of premature death, than the state average (pooled data for 2015–2017) and in 2017 most adults in the County (83.9 percent) described their health as “good,” “very good,” or “excellent.” Although County level rates of voter turnout are consistently lower than the state average, the County experienced a 17.8 percentage point increase in voter turnout in 2018 compared to the last non-presidential general election. Additionally, stakeholders expressed strong community engagement, as noted by a high interest in volunteer opportunities.

We also identified opportunities to improve the health and well-being of residents, several of which were also highlighted in the prior health assessments of Prince George’s County, Maryland.

- High rates of incidence and mortality for select cancers were observed. These data reflect stakeholder concerns about men’s health, as prostate cancer incidence and mortality rates are considerably higher in Prince George’s County than rates observed across Maryland or the United States.

- Obesity was common for both adults and youth in the County, which is concerning because it increases risk of worse health, including poor birth outcomes, cancer, and cardiovascular disease.
- Prevalence of chronic diseases and health behaviors varied across race/ethnicity and across socioeconomic characteristics – with worse health and unhealthy behaviors more likely to be reported by racial/ethnic minorities and among individuals with less education and lower household incomes.
- Nearly one in four adults in the County reported having a disability, which was primarily driven by reporting of mobility disabilities and primarily by older adults.

Stakeholders emphasized the need for resources and education to promote healthy behaviors like exercise and healthy eating. Thus, the County can consider its role in improving the accessibility, clarity and usability of health-promoting resources. It was noted that schools are an important place for these efforts to occur because of the importance of introducing healthy habits earlier. These concerns are supported by data, as few high school students reported eating vegetables often.

Finally, residents and stakeholders expressed concerns about mental health, and specifically that of children and adolescents in the County. In analysis of secondary data, we observed high rates of bullying and suicidality among middle school students, with almost one in four reporting bullying at school and almost one in four reporting seriously thinking about attempting suicide. These findings highlight the importance of delivering health care services in nontraditional settings, like schools, in order to help residents get the care they need.



Next Steps in Data Collection and Analysis

While there are important insights from the available health and well-being data, there are limitations that the County should consider as it pursues *Health in All Policies*. More information is needed on measures of well-being, such as resident life appraisal, engagement in daily stress management, participation in emotional health-promoting activities (and not just mental health disorder management), connection to nature, and sense of place as well as community measures of collective stress, social cohesion, trauma experience, and other aspects of environmental and economic well-being. There are some communities in the United States pursuing more data collection to capture community well-being, referenced in Chapter Nine, which can be useful for County planning.

4. Drivers of Health: Health Care Service Environment

Overview

Timely receipt of high-quality health care services is integral to the health and well-being of a community. A high functioning health care system enables individuals to obtain screening and preventive services to reduce the risk of poor health outcomes, treatment to address ongoing health conditions, and care for emergencies and urgent needs. Access to health care services is influenced by cost, insurance, overall provider supply, and supply of providers willing to see a patient, which may depend on insurance type, insurance status, age, and other factors (Agency for Healthcare Research and Quality, 2016). Upstream factors, including historic and systemic racism and bias, influence access and use of health care services. While some racial/ethnic disparities have narrowed over time, access to care remains challenging for many groups, including Black and Hispanic individuals and people living in poverty (Agency for Healthcare Research and Quality, 2016). Poor access to health care services may lead to inappropriate and costly use of care (e.g., use of emergency departments [EDs] for non-urgent needs) and poor health outcomes (e.g., delayed diagnosis of a condition).

In Prince George's County, health care services are delivered and coordinated by a mix of traditional health care providers (i.e., hospitals and medical offices), first responders, public safety agencies, schools, and health and human services agencies. This chapter describes the types of health care providers serving Prince George's County, their roles, and the services provided.



Key data used in this chapter describe access to care, utilization, and the health care workforce. Key datasets used to describe access to care include: BRFSS and YRBS/YTS. Key datasets used to describe utilization were obtained from the Maryland Health Services Cost Commission and DC Hospital Association. Key datasets used to describe the health care workforce include: Area Health Resources Files and data from the Health Resources Services Administration (HRSA), County Department of Fire and EMS, and the Maryland Health Care Commission

This chapter covers

- Office-based care
- Hospital based health care, including emergency department care and inpatient hospital care
- Health care offered via other settings (e.g., EMS, school-based, hospice).

Office-Based Health Care

Office-based health care describes the medical, dental, and mental health services that residents received outside of hospitals. We describe access to health care by analyzing self-reported barriers to health care from the 2016 and 2017 BRFSS, supply measures related to the health-care workforce, and highlight areas impacted by health professional shortages.

Access to Primary and Secondary Medical Care Services

In 2017, 21.5 percent of adults in the County reported having their last routine checkup more than one year ago and 13.7 percent reported having missed needed care due to cost (Table 4.1). In 2017, fewer County adults reporting having a routine checkup more than one year ago compared to neighboring counties and the state average. However, the County had a higher percentage of adults reporting cost as a barrier to health care in the past year compared to neighboring counties and the state average.

Table 4.1.
Barriers to Health Care Access and Utilization for Adults, by Jurisdiction, 2017

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Last routine checkup more than one year ago	21.5	28.6	26.7	31.2	28.5
Unable to see doctor due to cost in past year	13.7	11.3	9.4	11.7	10.9

SOURCE: Maryland Department of Health Query System, 2017a.

NOTES: Data from the BRFSS. All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size.

In examining barriers to access and utilization among subgroups within the County, we observe that White and Hispanic adults were more likely to report having a routine checkup more than one year ago. This pattern also was observed among adults with household incomes less than \$50,000 and those reporting no personal doctor. More Hispanic adults reported cost as a barrier to medical care than Black adults. Adults with less education were more likely to report cost as a barrier to medical care.

Table 4.2.
Barriers to Health Care Access and Utilization for Adults in Prince George’s County, 2017

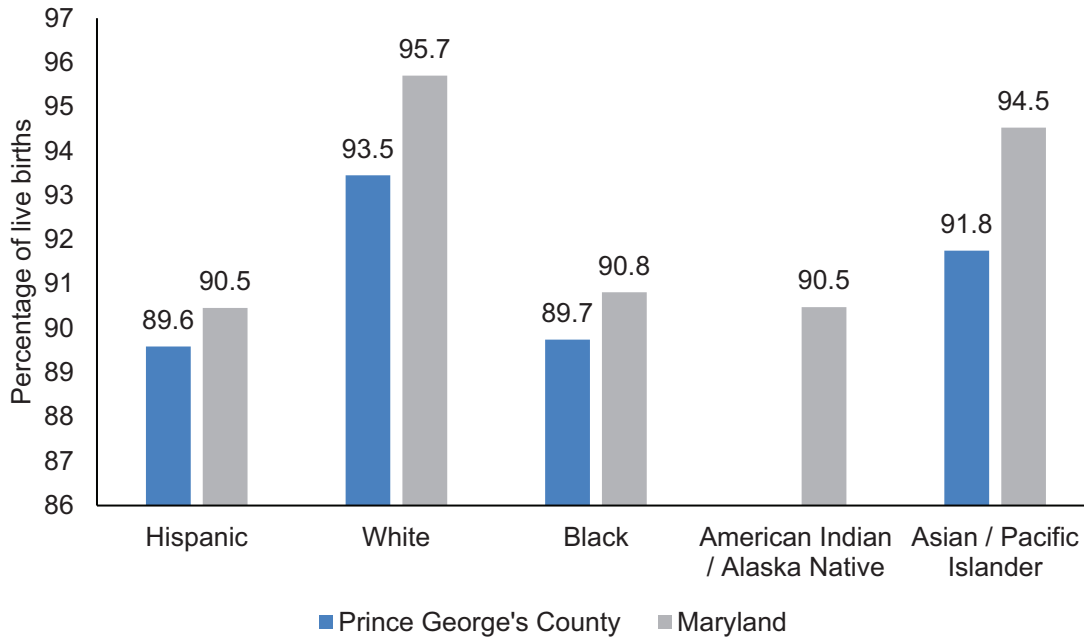
	Last routine checkup more than one year ago	Unable to see doctor due to cost in past year
Overall	21.5	13.7
Demographics		
Age group*		
18-64	23.3	15.2
65 and older	10.8	5.7
Sex		
Female	17.1	15.6
Male	25.3	11.5
Race		
White, non-Hispanic	27.2	NA
Black, non-Hispanic	18.6	9.7
Hispanic	29.1	24.6
Socioeconomic characteristics		
Educational attainment		
Above high school	21.5	7.9
High school or less	22.2	22.8
Household income		
\$50k and above	19.0	NA
Below \$50k	27.4	28.1
Has a personal doctor		
Has a personal doctor	14.2	8.7
No personal doctor	45.9	27.1

SOURCE: Maryland Department of Health Query System, 2017a.

NOTES: Data from the BRFSS. All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size or other reason.

We examine racial/ethnic disparities in receipt of prenatal care to better understand access to care for pregnant women. In 2018, most live births in Prince George’s County were to Black mothers (Prince George’s County Health Department, 2019c), however these mothers were less likely to receive timely prenatal care compared to White mothers (Figure 4.1).

Figure 4.1.
Percentage of Live Births Receiving Timely Prenatal Care, by Race/Ethnicity, 2018



SOURCE: Maryland Vital Statistics Administration, 2019.

NOTES: All race categories exclude Hispanic individuals. Timely prenatal care was calculated by subtracting the percentage of live births with late or no prenatal care from 100. Late/No prenatal care is pregnancy-related care beginning in the 3rd trimester (7-9 months) or when no pregnancy-related care was received at all.

We examined the supply of health care providers in the County by first examining physician to population ratios. From 2013 to 2017 (the most recent year of data available), there were declines in the number of general internal medicine physicians and pediatricians per 100,000 population (Table 4.3). There were smaller declines in the physician to population ratio for select medical and surgical specialties. During this period, the County experienced growth in the numbers of family practice physicians and general surgeons.

Table 4.3.
Physician Counts and Rate per 100,000 for Prince George's County, 2013–2017

	Count					Rate per 100,000				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Primary Care										
Family Practice	174	182	181	181	184	1.96	2.01	1.99	1.99	2.02
General Internal Medicine	293	288	290	288	287	3.29	3.18	3.19	3.17	3.14
Pediatrics	123	118	117	119	121	1.38	1.31	1.29	1.31	1.33
Medical Specialties										
Allergy & Immunology	10	12	12	10	12	0.11	0.13	0.13	0.11	0.13
Cardiovascular Disease	40	40	41	38	41	0.45	0.44	0.45	0.42	0.45
Dermatology	22	21	20	21	22	0.25	0.23	0.22	0.23	0.24
Gastroenterology	24	24	23	23	23	0.27	0.27	0.25	0.25	0.25
Pulmonary Disease	13	13	13	14	14	0.15	0.14	0.14	0.15	0.15
Psychiatry	46	49	49	49	47	0.52	0.54	0.54	0.54	0.52
Pediatric Subspecialties	21	19	19	20	20	0.24	0.21	0.21	0.22	0.22
Surgical Specialties										
General	51	54	59	57	59	0.57	0.60	0.65	0.63	0.65
Neurological	6	4	4	4	4	0.07	0.04	0.04	0.04	0.04
Ophthalmology	33	32	34	34	35	0.37	0.35	0.37	0.37	0.38
Orthopedic	42	39	35	38	36	0.47	0.43	0.39	0.42	0.39
Otolaryngology	12	10	10	9	9	0.14	0.11	0.11	0.10	0.10
Plastic	8	8	8	8	9	0.09	0.09	0.09	0.09	0.10
Thoracic	5	6	6	7	6	0.06	0.07	0.07	0.08	0.07
Hospital-based										
Anesthesiology	57	54	53	52	50	0.64	0.60	0.58	0.57	0.55
Emergency Medicine	58	60	57	61	62	0.65	0.66	0.63	0.67	0.68
Pathology	13	13	12	12	15	0.15	0.14	0.13	0.13	0.16
Physical Medicine / Rehabilitation	22	23	25	23	25	0.25	0.25	0.28	0.25	0.27

SOURCE: Health Resources & Services Administration, 2019a.

NOTES: Raw data derived from the American Medical Association Master File. Provides counts of non-federal medical doctors (MDs). FTE, full time equivalent.

In comparing physician to population ratios across jurisdictions, Prince George's County had a much smaller supply of primary care physicians compared to Baltimore, Howard, and Montgomery Counties in 2017 (Table 4.4). This was also observed for all medical specialties, surgical specialties, and hospital-based physician specialties and also true when compared to rates across the entire United States.

Table 4.4.
Physician FTE Rate per 100,000, by Jurisdiction, 2017

	Prince George's County	Baltimore County	Howard County	Montgomery County	United States
Primary Care					
Family Practice	2.02	2.09	4.24	3.01	3.05
General Internal Medicine	3.14	7.68	11.80	8.47	3.65
Pediatrics	1.33	2.50	5.33	4.55	1.83
Medical Specialties					
Allergy & Immunology	0.13	0.24	0.44	0.77	0.14
Cardiovascular Disease	0.45	1.12	1.43	1.48	0.70
Dermatology	0.24	0.54	0.53	0.99	0.38
Gastroenterology	0.25	0.75	1.28	0.94	0.45
Pulmonary Disease	0.15	0.63	1.28	0.80	0.40
Psychiatry	0.52	2.68	3.80	3.16	1.19
Pediatric Subspecialties	0.22	0.78	2.15	2.05	0.83
Surgical Specialties					
General	0.65	1.67	1.87	1.72	1.20
Neurological	0.04	0.32	0.09	0.37	0.20
Ophthalmology	0.38	1.17	1.06	1.76	0.58
Orthopedic	0.39	1.45	1.00	1.51	0.81
Otolaryngology	0.10	0.61	0.31	0.75	0.32
Plastic	0.10	0.43	0.25	0.60	0.25
Thoracic	0.07	0.19	0.28	0.21	0.14
Hospital-based					
Anesthesiology	0.55	2.38	4.48	2.57	1.41
Emergency Medicine	0.68	1.23	2.90	2.09	1.29
Pathology	0.16	0.53	1.00	1.60	0.54
Physical Medicine / Rehabilitation	0.27	0.69	0.53	0.71	0.35

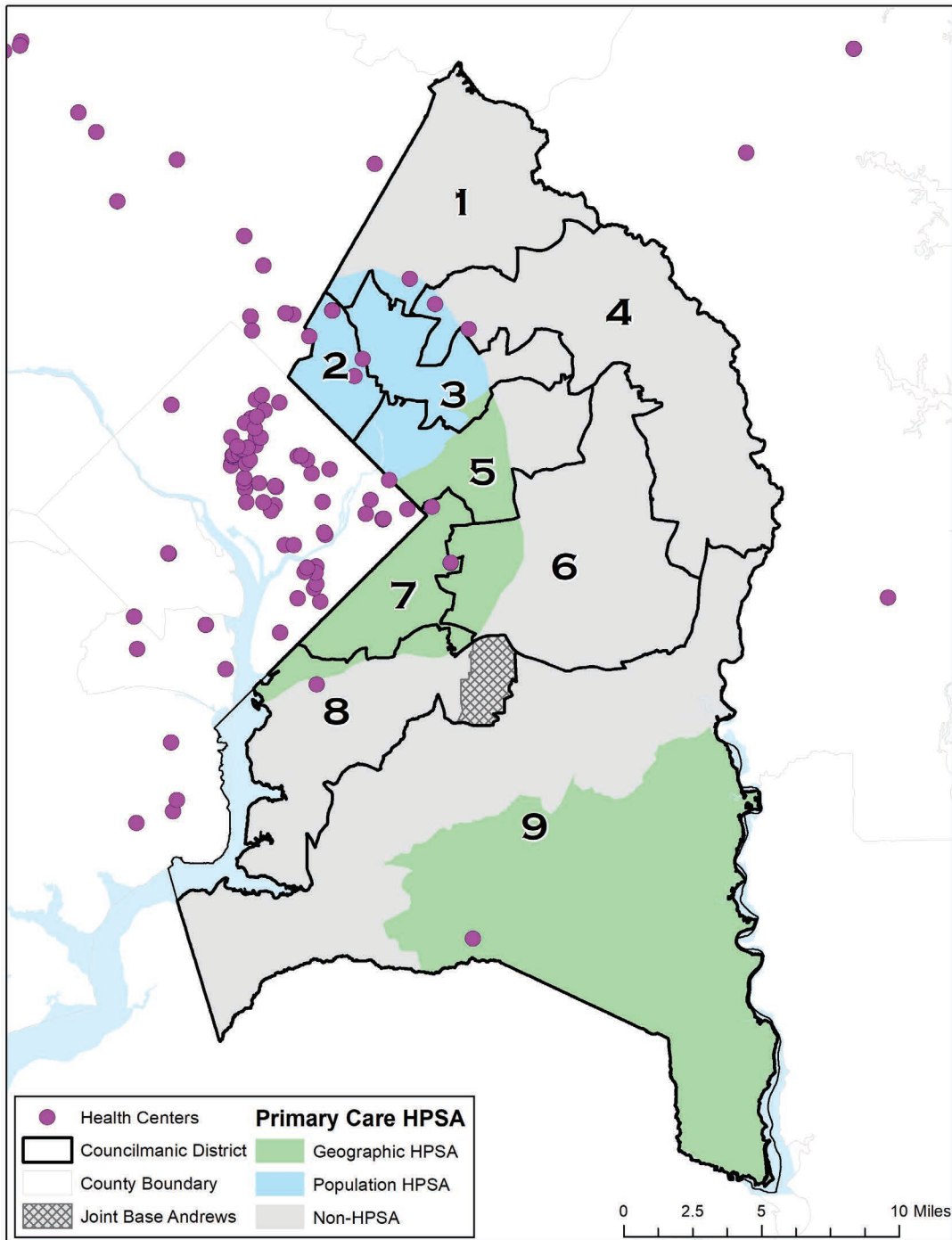
SOURCE: Health Resources & Services Administration, 2019a.

NOTES: Raw data derived from the American Medical Association Master File. Provides counts of non-federal medical doctors (MDs). Counts are of full time equivalent (FTE) physicians. FTE is considered to be working eight hours per day, five days per week. Working 20 hours per week is considered 0.5 FTE.

Not well reflected in these data is the fact that more health care is now delivered by non-physicians, including nurse practitioners (NPs) and physician assistants (PAs). For example, a national study of adults with private health insurance found that medical office visits to primary care physicians declined by 18 percent, while visits to NPs and PAs increased by 129 percent during 2012 to 2016 (Frost & Hargraves, 2018). Additionally, there are more options for receiving health care services outside the traditional medical office. For example, more Americans are receiving care in retail clinics (often located in retail pharmacies and drug stores) (Mehrotra & Lave, 2012). These clinics often offer immediate walk-in appointments, extended hours, and list prices, which can make them easier to access for many people (Levine & Linder, 2016).

HRSA designates communities, using census tracts, as having health care provider shortages in primary care, dental health, or mental health. HRSA uses a variety of information to identify health professional shortage areas (HPSAs). Shortages may be identified due to geography (e.g., lack of providers nearby) and population (e.g., lack of providers to serve specific populations, such as Medicaid enrollees) or based on facility (e.g., large health care facilities report few available providers) (Health Resources & Services Administration, 2019b). Primary care HPSAs are the most common type of HPSA in Prince George's County. These shortage areas, along with the locations of service sites of Federally Qualified Health Centers (FQHCs), are illustrated in Figure 4.2. All districts in the County have at least some communities within those districts, which are experiencing primary care shortages. Shortages are most often observed in the communities neighboring Washington, DC. District 7 is the only district that is completely designated as a geographic primary care shortage area. District 2 is completely designated as a primary care shortage area due to its large Medicaid-insured population.

Figure 4.2.
Primary Care Health Professional Shortage Areas in Prince George’s County, 2018



SOURCE: Health Resources & Services Administration, 2019b.

NOTES: HPSA, health professional shortage areas. health. HPSAs are identified based geography (e.g., lack of providers nearby) and population (e.g., lack of providers to serve specific populations, such as Medicaid enrollees) or based on facility (e.g., large health care facilities report few available providers). “Geographic HPSA” identified areas with few providers. “Population HPSA” identified areas with underserved populations.

Access to Behavioral and Mental Health Providers

As noted in the prior chapter, mental health affects overall health and disproportionately impacts some subgroups, including Hispanic adults and individuals in lower income households. As illustrated in Table 4.4, the rate of psychiatrists per 100,000 population is much lower in Prince George’s County than in neighboring jurisdictions. In 2017, Prince George’s County had 0.52 FTE psychiatrists compared to 2.68 in Baltimore County, 3.80 in Howard County, and 3.16 in Montgomery County. Although the number of psychiatrists declined in the County in recent years (Table 4.3), the number of mental health providers in the County increased. Mental health providers encompass a variety of providers, including licensed clinical social workers, counselors, and marriage and family therapists. The ratio of the county population to mental health providers improved, from 1,151 to 1 in 2014 to 806 to 1 in 2018 (Table 4.5). Throughout all counties in Maryland, this ratio ranges from 2,770 to 1 to 230 to 1. Several hospitals in the County offer inpatient psychiatric care. As of fiscal year 2019, there were 67 licensed acute care psychiatric beds in the County, spread across three hospitals (Table 4.6). Few census tracts in the County are designated mental health professional shortage areas (Figure 4.3). These designations are driven by the large number of Medicaid-eligible residents in these communities.

Table 4.5.
Ratio of Population to Mental Health Providers in Prince George’s County, 2014–2018

Year	Total Mental Health Providers	Ratio of the Population to Mental Health Providers
2014	773	1,151:1
2015	854	1,059:1
2016	936	972:1
2017	1,025	886:1
2018	1,133	806:1

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from CMS, National Provider Identification file 2013-2018. Mental health providers are defined as psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and mental health providers that treat alcohol and other drug abuse, as well as advanced practice nurses specializing in mental health care.

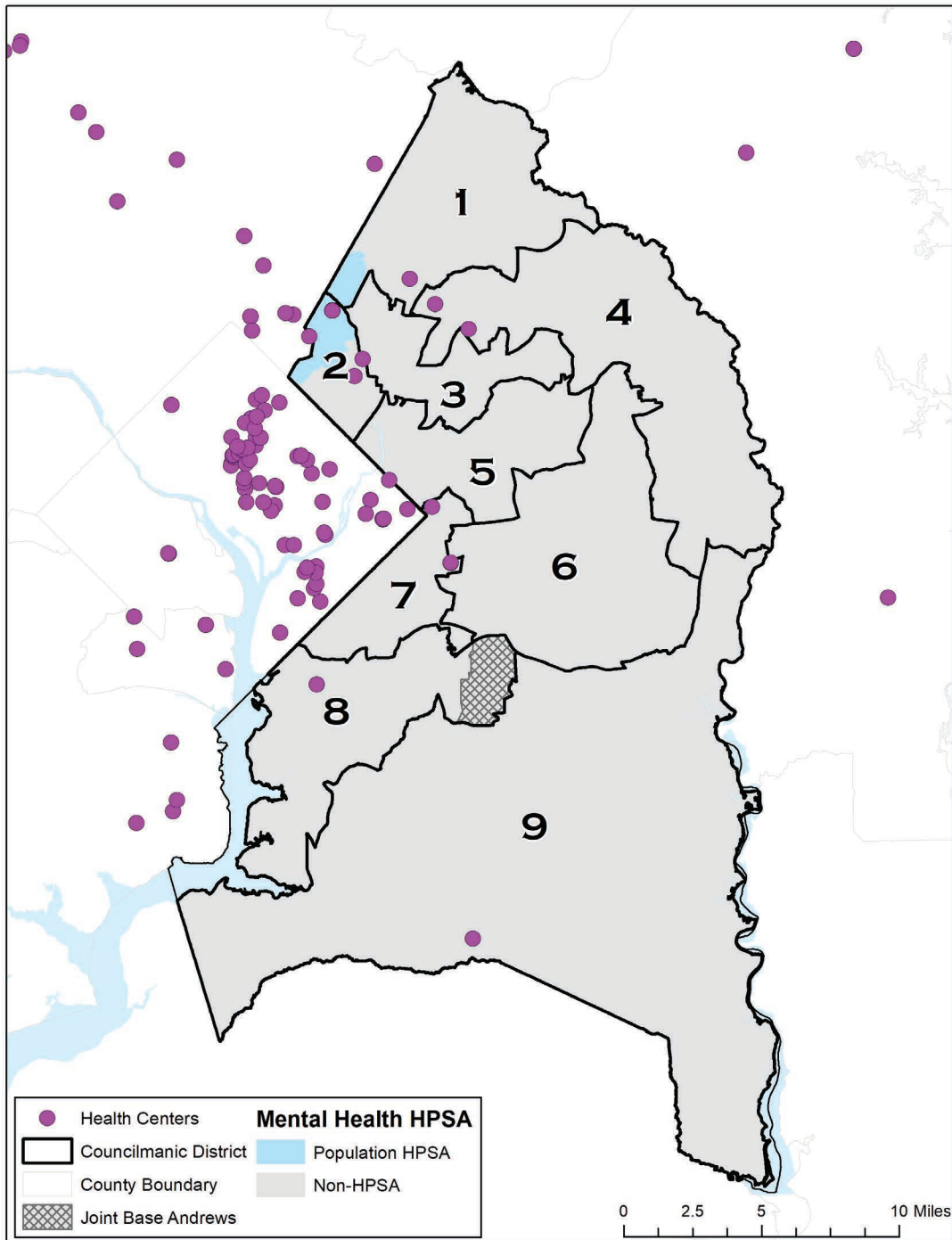
Table 4.6.
License Acute Care Psychiatric Beds by Hospital in Prince George’s County, 2015–2019

	2015	2016	2017	2018	2019
MedStar Southern Maryland Hospital Center	25	25	25	25	25
UM Laurel Regional Hospital	14	9	18	16	10
UM Prince George’s Hospital Center	28	28	28	28	32
Total	67	62	71	69	67

SOURCE: Maryland Health Care Commission, 2019a.

NOTES: Data from annual reports on licensed acute care beds by hospital and service. Acute care beds generally accommodate hospital days of 30 days or less. Data presented for each fiscal year.

Figure 4.3.
Mental Health Professional Shortage Areas in Prince George's County, 2018



SOURCE: Health Resources & Services Administration, 2019b.

NOTES: HPSA, health professional shortage areas. HPSAs are identified based on geography (e.g., lack of providers nearby) and population (e.g., lack of providers to serve specific populations, such as Medicaid enrollees) or based on facility (e.g., large health care facilities report few available providers). "Population HPSA" identified areas with underserved populations.

Access to Dental Care

Poor oral health can cause pain, problems sleeping, and embarrassment (American Dental Association Health Policy Institute, 2015). Fewer than two-thirds of adults in the County reported visiting a dentist in the past year and 10 percent of adults reported having received their last dental exam more than five years ago (Table 4.7). In 2016, about half of adults in the County reported having no permanent teeth removed, which is an indicator of good oral health. Fewer adults visited a dentist in the past year in the County (65 percent) than the state overall (68 percent) and compared to nearby counties.

Table 4.7.
Self-Reported Use of Dental Care and Oral Health for Adults in Prince George’s County, 2016

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Visited dentist in past year	64.9	66.2	75.4	75.0	68.1
Last visited dentist 5+ years ago	7.7	9.1	5.4	3.8	8.1
No permanent teeth removed	53.1	58.4	67.9	64.7	58.6

SOURCE: Maryland Department of Health Dataset Query System, 2016.

NOTES: All rates are age-adjusted unless otherwise indicated.

In examining use of dental care and oral health for subgroups within the County (Table 4.8), we find that Hispanic adults were least likely to have a dental visit in the last year and more likely to have permanent teeth removed. Income, educational attainment, and having a personal doctor were all associated with higher rates of having visited a dentist in the past year and having no permanent teeth removed.

Table 4.8.
Self-Reported Use of Dental Care and Oral Health for Adults in Prince George’s County, 2016

	Visited Dentist in Past Year	Last Visited Dentist 5+ Years Ago	No Permanent Teeth Removed
Overall	64.9	7.7	53.1
Demographics			
Age group*			
18-64	65.0	7.4	58.9
65 and older	66.2	8.7	21.2
Sex			
Female	68.4	6.4	51.3
Male	60.9	9.2	54.9
Race			
White, non-Hispanic	69.1	9.9	64.7
Black, non-Hispanic	69.0	7.4	55.5
Hispanic	50.9	NA	47.3
Socioeconomic characteristics			
Educational attainment			
Above high school	70.4	6.4	61.4
High school or less	56.1	10.1	39.5
Household income			
\$50k and above	72.9	3.6	62.5
Below \$50k	53.5	14.0	45.3
Has a personal doctor			
Has a personal doctor	70.2	5.3	54.9
No personal doctor	40.3	18.4	47.8

SOURCE: Maryland Department of Health Dataset Query System, 2016.

NOTES: All rates are age-adjusted unless otherwise indicated. *Indicates crude rate. NA, indicates the rate was not available due to small sample size.

The number of dentists in the County has grown. The ratio of the County population to dentists improved, from 1,712 to 1 in 2013 to 1,645 to 1 in 2017 (Table 4.9). When examining dental health professional shortage areas (Figure 4.4), only District 9 has communities with this designation. This region, however, was flagged as having unusually high needs.

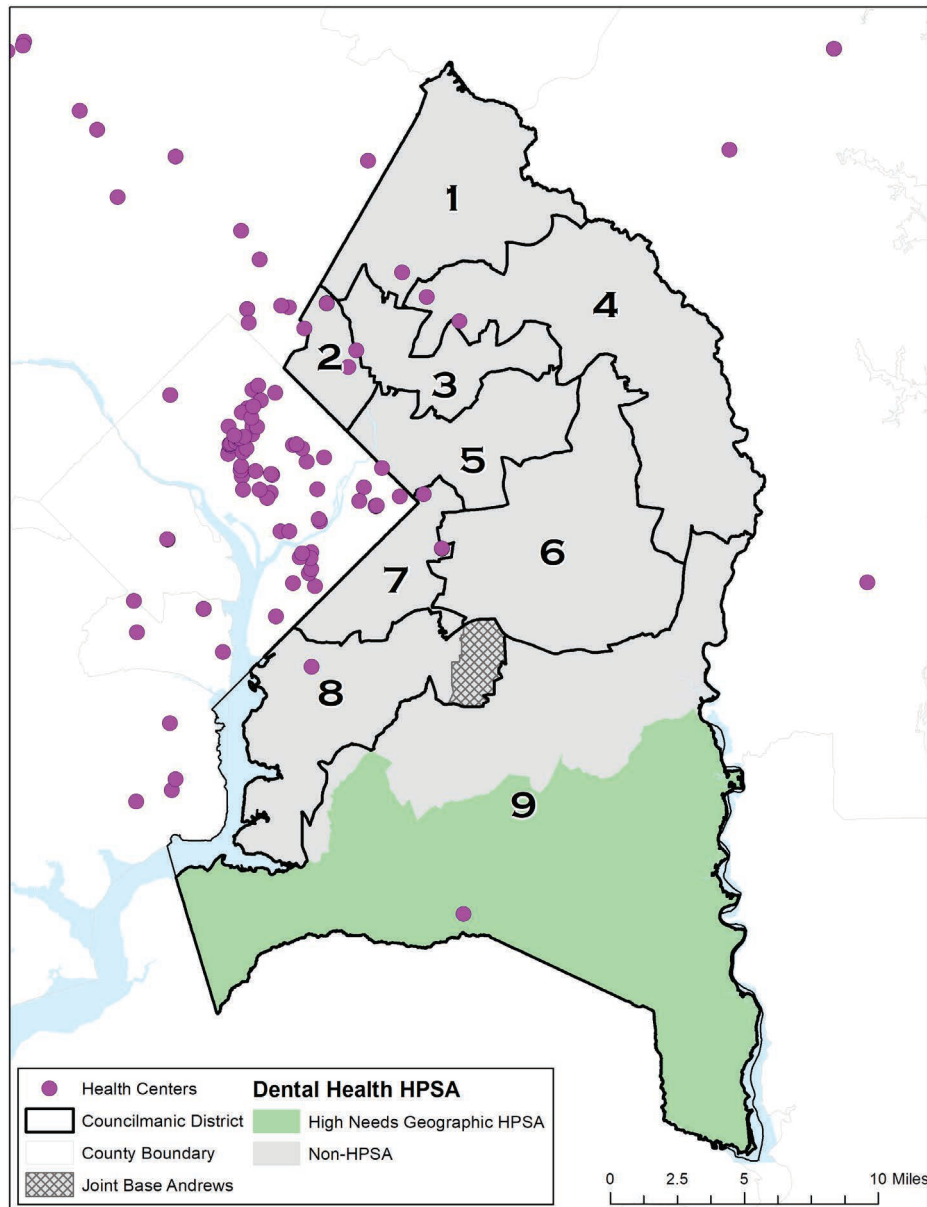
Table 4.9.
Ratio of Population to Dentists in Prince George’s County, 2013–2017

Year	Total Dentists	Ratio of the Population to Dentists
2013	520	1,712:1
2014	539	1,678:1
2015	542	1,678:1
2016	550	1,651:1
2017	555	1,645:1

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from the 2013-2017 Area Health Resources File and the National Provider Identification file.

Figure 4.4.
Dental Health Professional Shortage Areas in Prince George's County, 2018



SOURCE: Health Resources & Services Administration, 2019b.

NOTES: HPSA, health professional shortage areas. HPSAs are identified based on geography (e.g., lack of providers nearby) and population (e.g., lack of providers to serve specific populations, such as Medicaid enrollees) or based on facility (e.g., large health care facilities report few available providers). "High Needs Geographic HPSA" identified areas with few providers and population with high needs.

Hospital-Based Health Care

Emergency Departments (EDs)

EDs offer care to the critically ill and injured. Importantly, EDs are the only part of the U.S. health care system required to screen and stabilize all patients, regardless of insurance status or ability to pay. Thus, EDs frequently provide non-emergency care to individuals living in poverty. Prior research suggests that nearly half of all hospital-associated health care services in the United States are delivered in EDs and that EDs are increasingly responsible for referrals for inpatient care (Marcozzi, Carr, Liferidge, Baehr, & Browne, 2018; Morganti et al., 2013). The results below describe the common reasons for ED visits for adults and children overall, by race/ethnicity, and by geography. We present age-adjusted rates per 100,000 population.

In 2017, adult county residents made 32,315 visits per 100,000 population to the 16 EDs serving county residents in Maryland and DC. The majority of visits were made to the 11 EDs in Maryland, with fewer visits made to EDs in DC (Table 4.10). More ED visits were made to Doctors Community Hospital, located in Lanham, Maryland, MedStar Southern Maryland Hospital Center, located in Clinton, MD, and University of Maryland Prince George's Hospital Center, located in Cheverly, Maryland. Children made 34,244 visits per 100,000 population to 11 EDs in Maryland and DC. About 44 percent of ED visits for children were to Children's National Medical Center in DC.

Table 4.10.
Percentage of ED Visits by Hospital for Adults and Children, 2017

	Location	% for Adults	% for Children
Doctors Community Hospital*	MD	16.3	8.2
MedStar Southern Maryland Hospital Center*	MD	11.9	5.5
University of Maryland (UM) Prince George's Hospital Center*	MD	11.3	6.4
Fort Washington Medical Center*	MD	10.4	5.3
UM Bowie Health Center*	MD	9.8	7.7
Washington Adventist Hospital	MD	6.5	4.2
Laurel Medical Center*	MD	5.6	3.4
Holy Cross Hospital	MD	5.1	5.6
MedStar Washington Hospital Center	DC	4.3	0
Anne Arundel Medical Center	MD	4	3.9
George Washington University	DC	2.4	0
Providence Hospital	DC	2.3	0
Howard County General Hospital	MD	1.3	1.5
Charles Regional Medical Center	MD	1.2	0
Howard University Hospital	DC	1.2	0
MedStar Georgetown University Hospital	DC	1.1	0
Children's National Medical Center	DC	0	44.3

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Children are younger than 18 years. *Located in Prince George's County.

The most common reasons for ED visits for adults and children are listed in Tables 4.11 and 4.12. For adults, most ED visits were due to sprains and strains (6.1 percent). For children, most ED visits were due to upper respiratory infections (11.7 percent).

Table 4.11.
Most Common Reasons for ED Visits for Adults, Percentage of all ED visits, 2017

	Percentage
Sprains and strains	6.1
Chest pain	6.0
Abdominal pain	4.9
Back pain	4.8
Superficial injury or contusion	3.5

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Reasons are Clinical Classifications Software (CCS) codes which group related diagnoses and procedures into meaningful categories.

Table 4.12.
Most Common Reasons for ED Visits for Children, Percentage of all ED visits, 2017

	Percentage
Upper respiratory infections	11.7
Viral infections	4.8
Injuries due to external causes	4.6
Superficial injury or contusion	4.3
Ear infections and related conditions	3.9

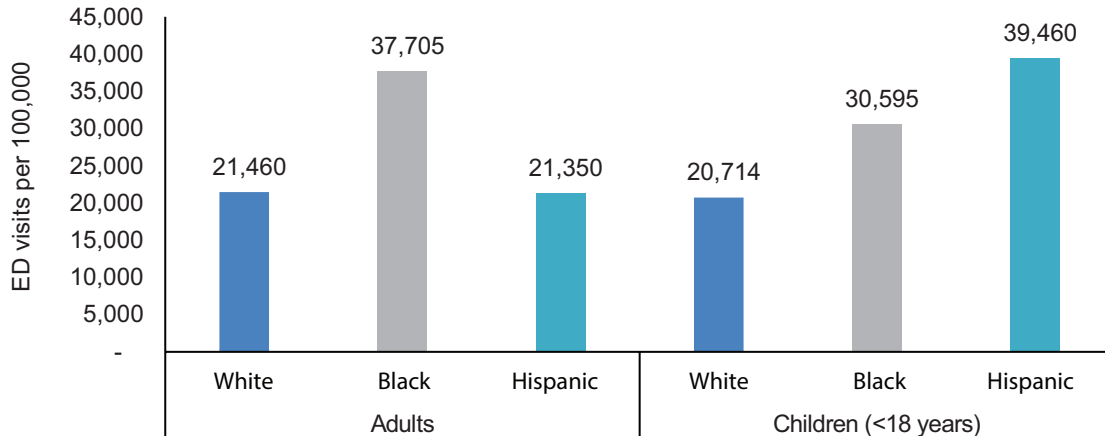
SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Children are younger than 18 years. Reasons are CCS codes which group related diagnoses and procedures into meaningful categories.

Variation in ED visits by race/ethnicity

Rates of ED visits varied across racial/ethnic groups. ED visit rates among adults were greatest for Black adults (37,705 per 100,000) and, among children, were greatest for Hispanic children (39,460 per 100,000) (Figure 4.5).

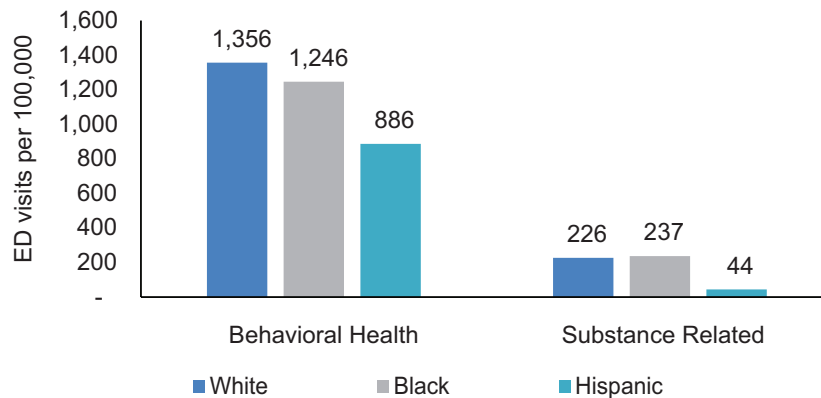
Figure 4.5.
Rates of ED Visits for Adults and Children per 100,000 Population, by Race and Ethnicity, 2017



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.
 NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George’s County residents. Adults are aged 18 years and older. Children are younger than 18 years. Rates are age-adjusted and presented as rates per 100,000 population.

When examining ED visit rates for adults by race and ethnicity for mental and behavioral health conditions (Figure 4.6), high rates were observed for White adults (1,356 visits per 100,000) and Black adults (1,246 visits per 100,000). High ED visit rates for substance-related conditions were also observed for White adults (226 visits per 100,000) and Black adults (237 visits per 100,000). ED visit rates for Hispanic adults were considerably lower for mental and behavioral health conditions (886 visits per 100,000) and substance-related conditions (44 visits per 100,000).

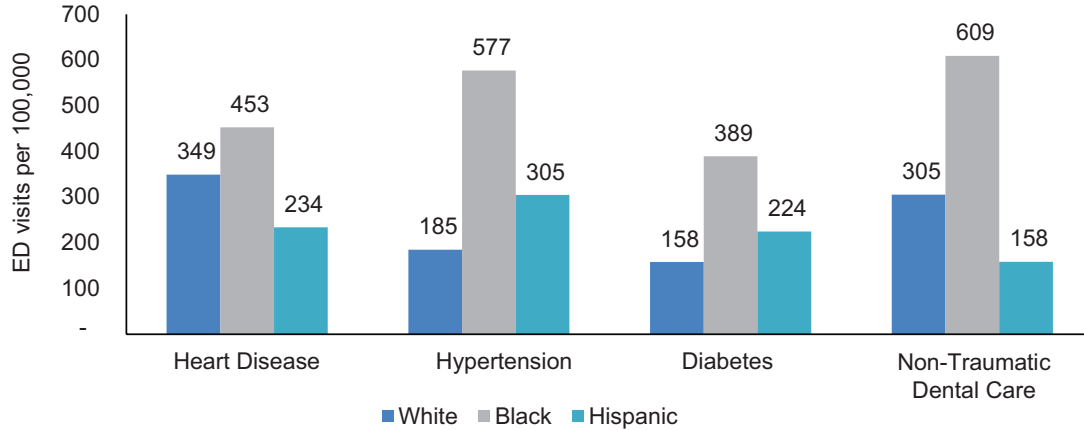
Figure 4.6.
Rates of ED Visits for Mental and Behavioral Health Conditions and Substance-Related Conditions for Adults per 100,000 Population, by Race and Ethnicity, 2017



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.
 NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George’s County residents aged 18 years and older. Rates are age-adjusted and presented as rates per 100,000 population.

When examining ED visit rates for adults by race and ethnicity for chronic conditions (Figure 4.7), Black adults had the highest ED visit rates for heart disease, hypertension, diabetes, and non-traumatic dental care. For Black adults, ED visits rates for hypertension were 577 per 100,000 and 609 per 100,000 for non-traumatic dental care.

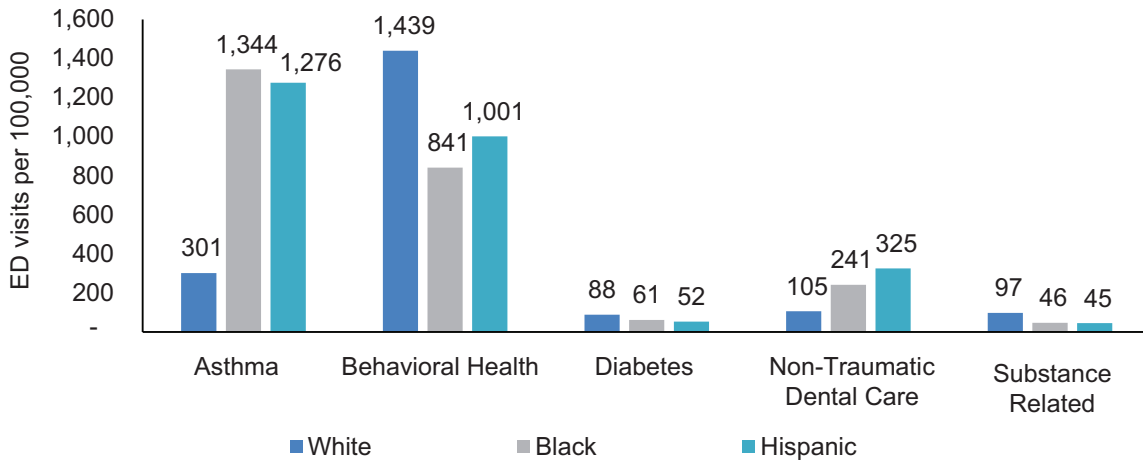
Figure 4.7.
Rates of ED Visits for Chronic Conditions for Adults per 100,000 Population, by Race and Ethnicity and by Condition, 2017



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.
 NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George’s County residents aged 18 years and older. Rates are age-adjusted and presented as rates per 100,000 population. Non-traumatic dental care identifies conditions that can be prevented or best treated in a traditional dental office. It is an indicator of poor access to a usual source of dental care.

Rates of ED visits for asthma were more than four times higher for Black and Hispanic children than White children (Figure 4.8). Rates of ED visits for mental and behavioral health conditions were highest among White children (1,439 per 100,000) and lower among Hispanic (1,001 per 100,000) and Black children (841 per 100,000). Rates of ED visits for non-traumatic dental care were highest for Hispanic children (325 per 100,000) followed by Black children (241 per 100,000), and White children (105 per 100,000).

Figure 4.8.
Rates of ED Visits for Children per 100,000 Population, by Race and Ethnicity and by Condition, 2017



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.
 NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George’s County residents aged younger than 18 years. Rates are age-adjusted and presented as rates per 100,000 population.

Geographic Variation in ED Visits

Rates of ED visits per 100,000 population for adults were greatest in Districts 5 and 7 (Table 4.13). District 7 also had the greatest rates of ED visits for diabetes, heart disease, and hypertension for adults. District 5 had the greatest rates of ED visits for mental and behavioral health and substance-related conditions for adults. Behavioral health conditions were responsible for 1,178 ED visits per 100,000 population, in 2017. Additionally, non-traumatic dental care, which is an indicator for poor access to a usual source of dental care, was responsible for 467 ED visits per 100,000 population, which was a higher rate than for diabetes, heart disease, hypertension, or asthma. Additional maps illustrating rates of ED visits for select conditions by patient ZIP code and age group are included in Appendix C.

Table 4.13.
Rates of ED Visits for Adults per 100,000 Population, by District and Condition, 2017

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
All ED visits	32,315	28,443	28,420	30,260	30,708	39,625	33,477	40,224	33,734	30,739
Mental and behavioral health	1,178	1,398	1,289	1,103	1,096	1,668	1,025	1,280	960	993
Substance related	194	168	129	149	163	344	195	301	184	164
Diabetes	321	230	336	339	288	372	315	458	337	268
Heart disease	405	361	305	338	469	413	417	509	462	359
Hypertension	464	409	505	386	396	492	504	626	484	427
Non-traumatic dental care	467	393	277	440	385	587	483	697	577	477
Asthma	416	293	321	350	346	559	427	617	613	339

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents aged 18 years and older. Rates are age-adjusted and presented as rates per 100,000 population. Non-traumatic dental care identifies conditions that can be prevented or best treated in a traditional dental office. It is an indicator of poor access to a usual source of dental care.

Rates of ED visits for children were greatest in District 7 (Table 4.14). District 7 had the greatest rates of ED visits for mental and behavioral health conditions, substance related conditions, and asthma for children. Asthma was responsible for 1,250 per 100,000 ED visits for children. Asthma is best managed in primary care settings, but children who visit EDs for care often lack a usual medical provider or may not have adequate access to needed medications, often having expired prescriptions, missing inhalers, or lack inhalers in all settings (e.g., home, school, sports) (L. Johnson, H., Chambers, & Dexheimer, 2016). Mental and behavioral health conditions were responsible for 936 per 100,000 ED visits for children. The highest rates of ED visits for non-traumatic dental care were observed in Districts 2, 3, 7, and 8.

Table 4.14.
Rates of ED Visits for Children per 100,000 Population, by District and Condition, 2017

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
All ED visits	34,244	29,418	37,464	37,549	28,360	37,527	31,278	41,761	38,296	27,571
Asthma	1,250	790	988	1,107	918	1,318	1,405	1,865	1,863	1,136
Mental and behavioral health	936	1,015	940	869	973	948	931	1,075	982	720
Diabetes	59	72	37	46	41	65	62	72	103	45
Non-traumatic dental care	274	224	329	361	193	282	248	331	325	168
Substance related	49	48	61	47	40	50	59	70	43	33

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents aged younger than 18 years. Rates are age-adjusted and presented as rates per 100,000 population. Non-traumatic dental care identifies conditions that can be prevented or best treated in a traditional dental office. It is an indicator of poor access to a usual source of dental care.

Inpatient Hospitals

Inpatient hospital care is defined as involving an overnight stay at the hospital and therefore tends to include more serious and costly care. In fiscal year 2019, there were five hospitals operating a total of 686 licensed acute care beds (Table 4.15). Acute care beds generally accommodate hospital stays of 30 days or less. UM Prince George's Hospital Center operated the most beds (238), followed by Doctors Community Hospital (190) and MedStar Southern Maryland Hospital Center (176). The total number of licensed acute care beds in the County has declined from 836 in 2009 to 686 in 2019.

Table 4.15.
Licensed Acute Care Beds by Hospital in Prince George's County, 2009–2019

	Doctors Community Hospital	Fort Washington Medical Center	MedStar Southern Maryland Hospital Center	UM Laurel Regional Hospital	UM Prince George's Hospital Center	Total
2009	195	43	255	97	246	836
2010	190	43	246	95	254	828
2011	195	42	235	87	244	803
2012	219	41	238	83	242	823
2013	207	31	239	77	224	778
2014	198	33	227	78	214	750
2015	182	31	207	74	215	709
2016	163	34	208	60	237	702
2017	190	32	192	63	233	710
2018	210	32	182	61	230	715
2019	190	27	176	55	238	686

SOURCE: Maryland Health Care Commission, 2019a.

NOTES: Data presented for each fiscal year and obtained from annual reports on licensed acute care beds by hospital and service. Acute care beds generally accommodate hospital stays of 30 days or less. In 2017 the University of Maryland Medical System (UMMS) acquired Dimensions Health System, representing two acute care general hospitals, Laurel Regional Hospital and Prince George's Hospital Center. Dimensions Health System was renamed to University of Maryland Capital Regional Health and the two hospitals were renamed University of Maryland Laurel Regional Medical Center and University of Maryland Prince George's Medical Center, and joined UMMS.

Inpatient Utilization

The results below describe the common reasons for inpatient hospitalizations for adults and children overall, by race/ethnicity, and by geography. Information is presented on County residents who received care in Maryland or in DC. We present age-adjusted rates per 100,000 population.

In 2017, adult County residents had 10,603 hospital discharges per 100,000 population to the 12 hospitals serving County residents in Maryland and DC. Table 4.16 describes the percentage of inpatient hospitalizations by hospital for adults and children, sorted by percentage of hospitalizations for adults. Most hospitalizations occurred at Holy Cross Hospital, located in Silver Spring, Maryland, Prince George’s Hospital Center, located in Cheverly, Maryland, and Doctors Community Hospital, located in Lanham, Maryland (Table 4.16). Children had 2,582 hospital discharges per 100,000 population to nine hospital EDs in Maryland and DC. The majority of hospital discharges for children (69 percent) were to Children’s National Medical Center in DC.

Table 4.16.
Percentage of Inpatient Hospitalizations by Hospital for Adults and Children, 2017

	Location	% for Adults	% for Children
Holy Cross Hospital	MD	12.0	6.2
University of Maryland (UM) Prince George’s Hospital Center*	MD	11.9	4.8
Doctors Community Hospital*	MD	11.5	0
MedStar Washington Hospital Center	DC	10.6	0
MedStar Southern Maryland Hospital Center*	MD	10.5	2.1
Washington Adventist Hospital	MD	6.6	2.7
Anne Arundel Medical Center	MD	6.1	2
MedStar Georgetown University Hospital	DC	3.6	1.9
Laurel Medical Center*	MD	3.0	0
George Washington University	DC	3.0	0
Fort Washington Medical Center*	MD	2.4	0
Providence Hospital	DC	2.1	0
Johns Hopkins Hospital	MD	2.0	3.4
Howard County General Hospital	MD	1.6	0
Suburban Hospital	MD	1.5	0
University of Maryland Medical Center	MD	1.3	1.1
United Medical Center	DC	1.2	0
Sibley Memorial Hospital	DC	1.0	0
Children’s National Medical Center	DC	0	69

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George’s County residents. Adults are aged 18 years and older. Children are younger than 18 years. Rates are age-adjusted and presented as rates per 100,000 population. *Indicates location in Prince George’s County.

The most common reasons for hospitalizations for adults and children are listed in Tables 4.17 and 4.18. For adults, most hospitalizations were due to septicemia (6.2 percent), a serious bloodstream infection. For children, most ED visits were due to mood disorders (6.6 percent).

Table 4.17.
Most Common Reasons for Hospitalizations for Adults, Percentage of all Hospitalizations, 2017

	Percentage
Septicemia (except in labor)	6.2
Hypertension with complications	5.2
Other complications of birth	3.6
Acute cerebrovascular disease	2.8
Osteoarthritis	2.6

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Reasons are CCS codes which group related diagnoses and procedures into meaningful categories.

Table 4.18.
Most Common Reasons for Hospitalizations for Children, Percentage of all Hospitalizations in 2017

	Percentage
Mood disorders	6.6
Asthma	6.3
Pneumonia	4.5
Acute bronchitis	4.1
Sickle cell anemia	3.9

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

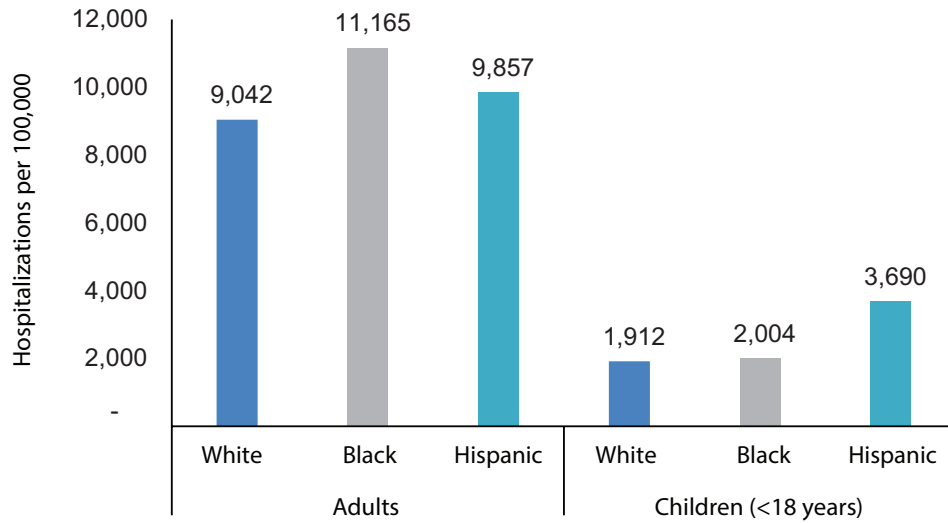
NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents. Children are younger than 18 years. Reasons are CCS codes which group related diagnoses and procedures into meaningful categories.

Variation in Hospitalization by Race/Ethnicity

During 2017, rates of hospitalizations were highest for Black adults (11,163 per 100,000) and for Hispanic children (3,690 per 100,000) (Figure 4.9). Hispanic children were hospitalized at a rate nearly double their White and Black counterparts. Maps illustrating rates of hospitalizations for select conditions by patient ZIP code and age group are available in Appendix C.

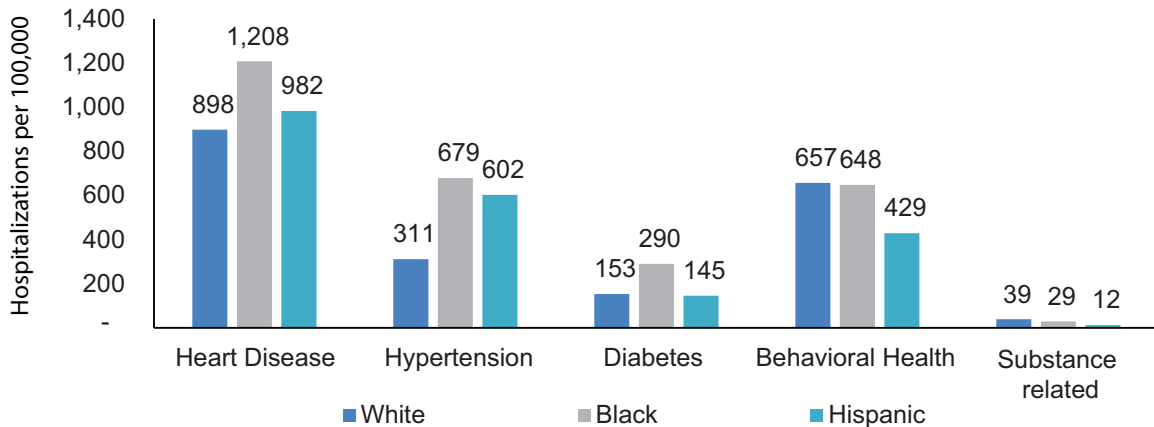
When examining rates of hospitalizations of adults by race and ethnicity (Figure 4.10), Black adults had the highest rates of inpatient hospitalizations for conditions associated with metabolic syndrome, including heart disease (1,208 per 100,000), hypertension (679 per 100,000), and diabetes (290 per 100,000). Hospitalization rates per 100,000 for mental and behavioral health conditions were similar for White (657) and Black adults (648), and notably higher than observed for Hispanic adults (429).

Figure 4.9.
Rates of Inpatient Hospitalizations for Adults and Children per 100,000 Population in 2017, by Race and Ethnicity



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.
 NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Children are younger than 18 years. Rates are age-adjusted and presented as rates per 100,000 population.

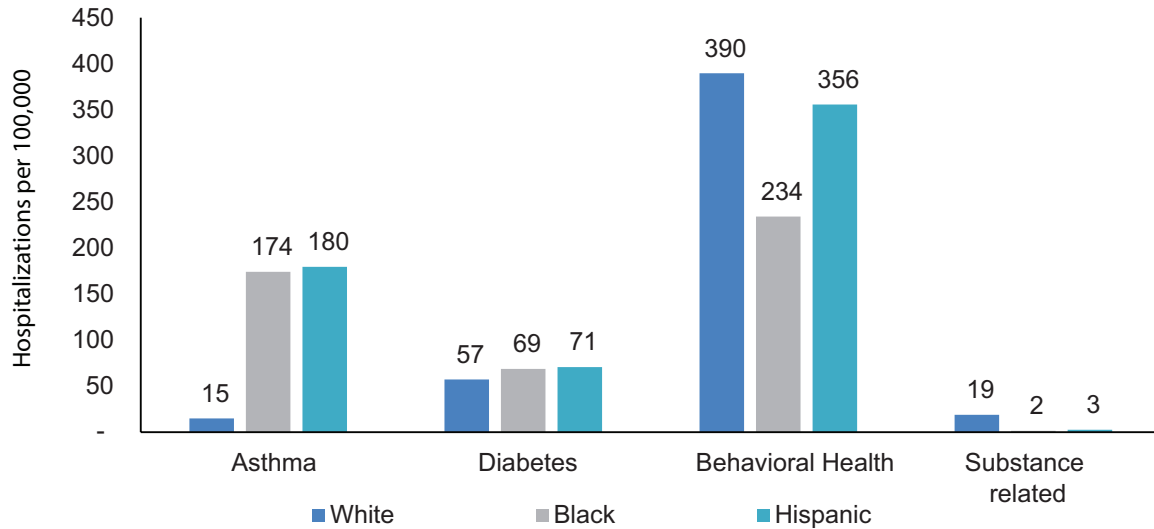
Figure 4.10.
Rates of Inpatient Hospitalizations for Adults per 100,000 Population in 2017, by Race and Ethnicity and by Condition



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.
 NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Rates are age-adjusted and presented as rates per 100,000 population.

Rates of asthma-related inpatient hospitalizations for children were more than 11 times higher for Black (174 per 100,000) and Hispanic (180 per 100,000) children compared to White children (15 per 100,000) (Figure 4.11). Rates of inpatient hospitalizations per 100,000 for mental and behavioral health conditions were 390 for White children and 356 for Hispanic children, notably higher than the rate of 234 for Black children.

Figure 4.11.
Rates of Inpatient Hospitalizations for Children per 100,000 Population in 2017, by Race and Ethnicity and by Condition



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents younger than 18 years.

Geographic Variation in Hospitalizations

Table 4.19 describes the rates of inpatient hospitalizations for adults by condition for the entire County and for each of the nine County councilmanic districts. Overall rates of hospitalizations for adults were highest in Districts 5 and 7. All districts had high rates of hospitalizations for heart disease, ranging from a high of 1,598 per 100,000 in District 7 to a low of 852 per 100,000 in District 1. District 7 also had the highest rate of hospitalizations for hypertension (910 per 100,000). Hospitalizations for mental and behavioral health conditions were highest in District 5 (798 per 100,000) and District 7 (814 per 100,000).

Table 4.19.
Rates of Inpatient Hospitalizations for Adults per 100,000 Population in 2017, by District and by Condition

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
All hospitalizations	10,603	9,716	10,272	10,206	9,984	12,313	11,024	13,357	9,492	10,406
Asthma	53	47	44	58	59	66	55	89	46	35
Mental and behavioral health	596	622	485	589	520	798	610	814	535	553
Diabetes	237	189	236	247	220	303	245	330	197	214
Heart disease	1,115	852	948	1,040	1,023	1,158	1,215	1,598	1,128	1,120
Hypertension	571	417	536	486	440	611	614	919	602	561
Substance related	26	20	16	19	23	35	26	53	31	26

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Rates are age-adjusted and presented as rates per 100,000 population.

Among children, overall rates of hospitalizations were similar across districts, and highest in District 3 (3,083 per 100,000) and District 7 (2,908 per 100,000) (Table 4.20). High rates of hospitalizations for mental and behavioral health conditions per 100,000 were observed in District 1 (363), District 7 (363), and District 8 (338). Hospitalizations for asthma were highest in District 7 (252 per 100,000) compared to the overall county rate of 162 per 100,000.

Table 4.20.
Rates of Inpatient Hospitalizations for Children per 100,000 Population in 2017, by District and by Condition

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
All hospitalizations	2,582	2,646	2,836	3,083	2,210	2,693	2,521	2,908	2,433	2,158
Asthma	162	108	150	130	124	157	204	252	184	169
Diabetes	67	65	44	54	48	61	82	52	72	111
Mental & behavioral health	286	363	312	276	198	297	270	363	338	206
Substance related	4	13	5	*	*	*	*	4	*	11

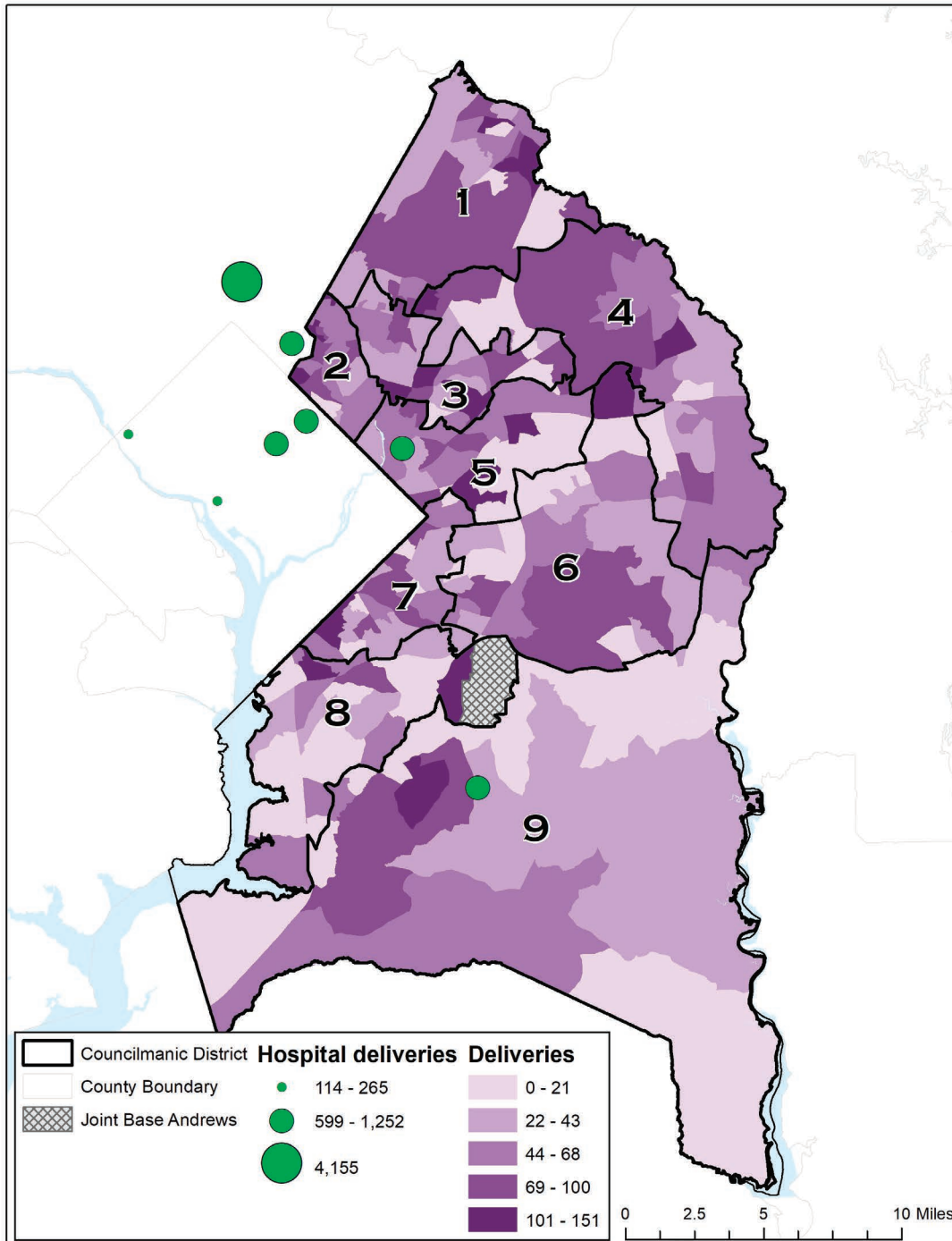
SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George’s County residents younger than 18 years. Rates are age-adjusted and presented as rates per 100,000 population.

*Suppressing small numbers.

As reported in the Maryland Vital Statistics Annual Report, in 2018 there were 12,160 live births in Prince George’s County (Maryland Department of Health, 2018). Figure 4.12 illustrates the location of hospitals providing delivery services to residents of Prince George’s County and the number of deliveries per census tract. In 2017, 85 percent of hospital-based deliveries for County residents occurred outside of Prince George’s County, with 37 percent of deliveries occurring at Holy Cross Hospital in Silver Spring, Maryland in Montgomery County.

Figure 4.12.
Map of Distribution of Births in Prince George’s County and the Hospitals Providing Delivery Services, by Census Tract, 2017



SOURCE: U.S. Census Bureau, 2019; Maryland Health Services Cost Review Commission, 2019; DC Hospital Association, 2019.

NOTES: Information about the percentage of hospital-based deliveries in Prince George’s County come from 2017 hospital discharge data from Maryland and DC. Limitations of these data include that they do not account for deliveries outside of hospitals or deliveries outside of Maryland and DC, and this percentage counts multiple births as a single hospital delivery. For the 995 deliveries at Anne Arundel Medical Center (9% of deliveries), we are not able to identify if these deliveries occurred in Bowie or outside of Prince George’s County. Not included in this map are 995 deliveries at Anne Arundel Medical Center and 114 deliveries at Charles Regional Medical Center.

Additional Health Care Facilities and Providers

Hospice

Hospice care offers supportive care to people with terminal illnesses, focusing on quality of life rather than treatment. According to the Maryland Health Care Commission Hospice Survey (2018), the majority of hospice patients (65.3 percent) in Prince George's County receive services in a private home. Information was not available on the number of hospice providers in the counties. Compared to nearby jurisdictions and the state, Prince George's County has a significantly lower rate of hospice use for patients aged 35 years and older (Table 4.21). Measuring supply is challenging because the Maryland Health Care Commission does not report the number of hospice beds available by county. When examining the number of hospice agencies or organizations, the number in the County in 2018 was similar to nearby counties.

Table 4.21.
Hospices, Hospice Deaths and Hospice Use Rates by Jurisdiction, 2018

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
Hospices*	3	4	1	3	25
Hospice deaths**	1,668	4,464	747	3,001	20,981
Hospice use rate, %**	27.6	54.7	44.1	50.9	43.5

SOURCE: Maryland Health Care Commission, 2019a; Health Resources & Services Administration, 2019a.

NOTES: Hospices are public agencies or private organizations or a subdivision of either that is primarily engaged in providing care to terminally ill individuals, meets the conditions of participation for hospices, and has a valid Medicare provider agreement. *Number of hospices comes from the Area Health Resources Files (HRSA).

**Hospice deaths and use rates are from the Maryland Health Care Commission. Hospice use rate measures the proportion of all deaths that are hospice deaths (i.e., hospice deaths for patients age 35 years or older per total deaths for those age 35 years or older).

More than half of hospice patients served in 2018 in Prince George's County were White, and nearly one in three were Black (Table 4.22). Of note, the Maryland Health Care Commission does not report this information for residents who identify as Hispanic.

Table 4.22.
Hospice Patients Served in Prince George's County by Race, 2018

	Percentage
White	56.5
Black	32.1
Multi-racial	6.4
Asian	4.8
Hawaiian or Pacific Islander	0.2
American Indian	0.1

SOURCE: Maryland Health Care Commission, 2019a.

In 2018, about a quarter ($n = 489$) of all hospice patients served were discharged (non-death) in Prince George's County (Table 4.23). Only 8.2 percent of hospice patients transferred to another hospice.

Table 4.23.
Hospice Patients with Non-Death Discharges in Prince George’s County, 2018

	Discharged by hospice	Withdrew from hospice	Transferred to another hospice	Other	Total non-death discharges
Discharges, %	41.7	39.1	8.2	10.2	24.4

SOURCE: Maryland Health Care Commission, 2019a.

Home Health

Home health clients are patients who require assistance with daily living activities and medical monitoring from a home health aide. About 66 percent of the home health clients in Prince George’s County are age 65 or older, compared to 70 percent across Maryland (Table 4.24).

Table 4.24.
Total Number of Home Health Clients by Jurisdiction and Age Group, 2016

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Under 1 yr.	541	363	74	1,442	3,316
1-4 yrs.	24	41	8	23	291
5-14 yrs.	33	67	12	39	326
15-24 yrs.	105	116	40	88	769
25-44 yrs.	706	842	189	516	4,901
45-64 yrs.	3,713	4,663	1,005	3,140	27,603
65-74 yrs.	3,939	4,894	1,206	3,643	28,820
75-84 yrs.	3,459	5,484	1,234	4,597	30,509
85+ yrs.	2,424	5,461	1,379	5,283	28,360
Unknown	0	10	2	11	24
Total	14,944	21,941	5,149	18,782	124,919

SOURCE: Maryland Health Care Commission, 2019b.

NOTES: Data retrieved from the Home Health Agency Survey.

Nursing Homes

Nursing homes are assisted living residences for patients requiring assistance with their daily routine and medical monitoring from registered nurses and skilled therapists (e.g., physical, occupational, etc.). During 2017, there were 2.4 licensed nursing home beds per 100 population aged 65 years and older (Table 4.25). Prince George’s County has the highest rate (91.7 percent) of bed occupancy in nursing homes, relative to nearby jurisdictions and the state average (87.9 percent).

Table 4.25.
Average Annual Bed Occupancy Rate and Average Annual Number of Licensed Nursing Home Beds by Jurisdiction, 2017

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Average annual number of licensed nursing home beds	2,826	5,345	567	4,520	27,369
Average annual number of licensed nursing home beds per 100 population aged ≥ 65 years	2.4	3.8	1.3	2.9	3.0
Average annual bed occupancy rate, %	91.7	87.2	90.9	86.5	87.9

SOURCE: Maryland Health Care Commission, 2019c; U.S. Census Bureau, 2019a.

NOTES: Population counts were obtained from the American Community Survey 1-Year Summary File, 2017

Public Safety

Emergency Medical Services

The Prince George’s County Fire and EMS Department (hereafter Fire/EMS) provides fire prevention and protection services along with emergency medical services. Emergency medical services (EMS) are an essential component of all health care systems, providing immediate care and triage for individuals experiencing illness and trauma. Because EMS agencies provide an entry way into EDs, they are also a key entity in the health care system for helping to reduce the number of ED visits that are treatable outside EDs. Use of EMS and EDs for non-emergency needs is inefficient and costly, and leads to less desirable patient care because EDs, unlike primary care providers, are not set up to provide continuous, coordinated, comprehensive, and patient-centered care.

During 2018, Fire/EMS responded to 148,424 calls to 911 for service. The majority of 911 calls (80.3 percent) resulted in the provision of medical services (Table 4.26). The percentage of 911 calls for medical services exhibited minimal variation across districts, ranging from 78.8 percent in District 9 to 82.8 percent in district 2. While many of these calls are for urgent medical needs, some are for less urgent needs and may be more efficiently handled outside the EMS system or without transportation to an ED. Of the 119,194 calls for medical services in the County, about one in four were considered to be for non-urgent medical services. The percentage of 911 calls for non-urgent medical services varied slightly across districts, ranging from 22.5 percent in District 6 to 26.6 percent in District 7.

Table 4.26.
Emergency Calls for Medical Services, 2018

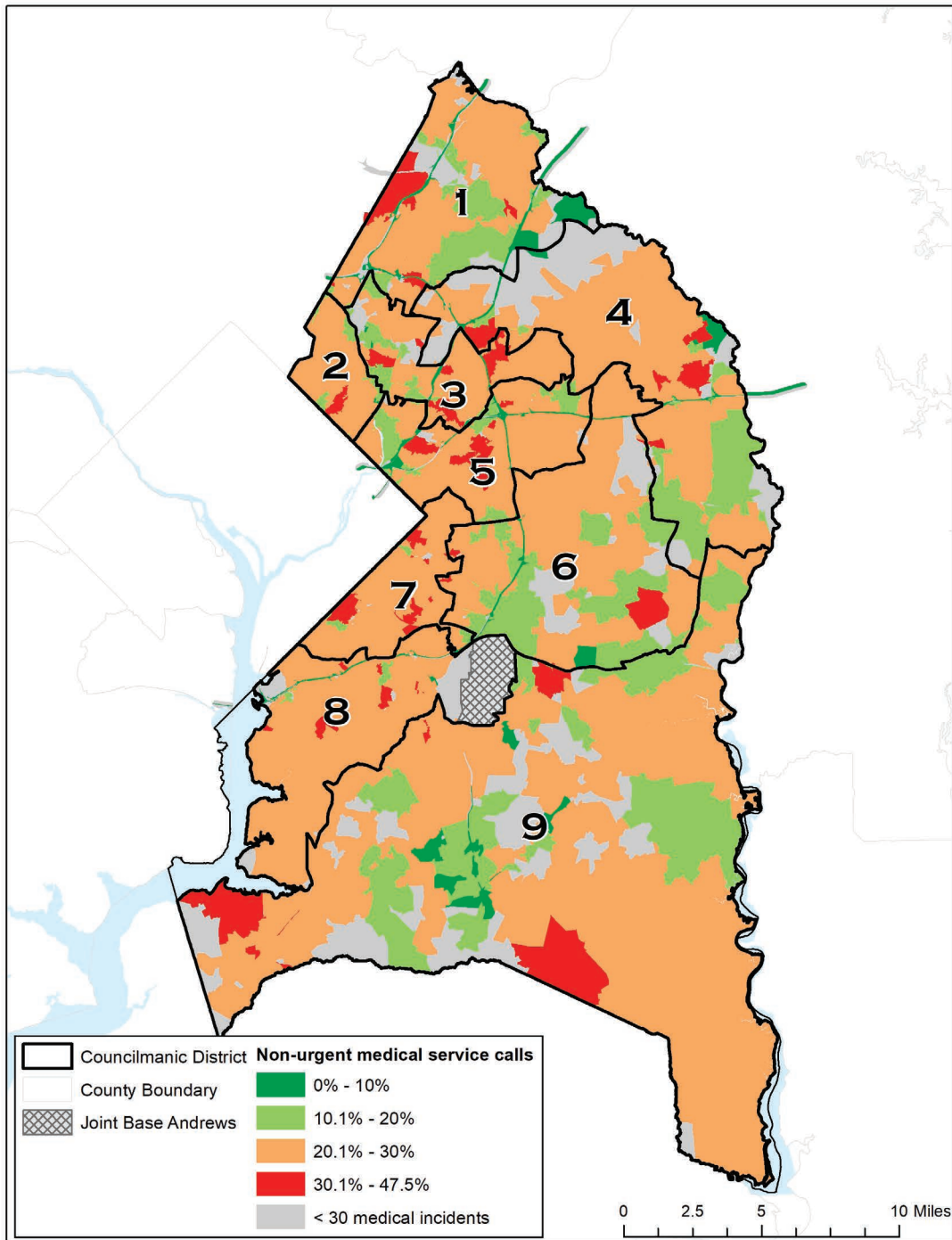
	Total calls	Total calls for medical services	Total calls for non-urgent medical services	% of calls for medical services	% of medical service calls for non-urgent medical services
County	148,424	119,194	29,153	80.3%	24.5%
By district					
1	14,678	11,652	2,837	79.4%	24.3%
2	13,510	11,180	2,881	82.8%	25.8%
3	14,309	11,322	2,663	79.1%	23.5%
4	14,617	11,610	2,843	79.4%	24.5%
5	19,152	15,441	3,726	80.6%	24.1%
6	19,182	15,170	3,414	79.1%	22.5%
7	21,635	17,745	4,714	82.0%	26.6%
8	18,106	14,647	3,680	80.9%	25.1%
9	13,235	10,427	2,395	78.8%	23.0%

SOURCE: Prince George's County Fire/EMS Department, 2019.

NOTES: Information on 911 calls in 2017 and 2018 was obtained directly from the Prince George's County Fire and EMS Department in 2019. This information is not publicly available. Calls for medical services include calls categorized as needing advanced life support ambulance, basic life support ambulance, police, or rescue services. Calls for non-urgent medical services include calls categorized as for medical services receiving a level 0 basic life support ambulance.

The distribution of emergency calls for non-urgent medical services for 2017 and 2018 combined is summarized in Figure 4.13. There are communities in all districts with higher than average rates of emergency calls for non-urgent medical services (i.e., >30 percent of calls).

Figure 4.13.
Map of Emergency Calls for Non-Urgent Medical Services, Pooled 2017 and 2018



SOURCE: Prince George's County Fire and EMS Department, 2019.

NOTES: Information on 911 calls in 2017 and 2018 was obtained directly from the Prince George's County Fire and EMS Department in 2019. This information is not publicly available. Calls for non-urgent medical services include calls categorized as for medical services receiving a level 0 basic life support ambulance.

Corrections

Correctional facilities are required by federal law to provide health services to incarcerated individuals and medical evaluations are part of standard booking procedure in jails. Nationally, jail inmates have higher rates of chronic diseases, infectious diseases, and behavioral and mental health conditions than the general population (Bronson & Berzofsky, 2017; Maruschak, Berzofsky, & Unangst, 2015). Although provision of health care services is required, evidence suggests that nationally, many prisoners have unmet health care needs (Wilper et al., 2009).

At the Correctional Facility in Prince George's County, health care services are primarily provided through contracts with local health care providers who come to the correctional facility to provide services. This facility houses inmates who are serving sentences of 18 months or less (approximately 11 percent of the inmate population), along with individuals who are awaiting trial or awaiting sentencing. Similar to national trends, jail inmates have higher rates of health conditions than the general population. As illustrated in Table 4.27, in 2018, most inmates (90 percent) reported a history of substance abuse, which was higher than the percentage of sentenced jail inmates nationally meeting the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (DSM-IV) criteria for drug dependence or abuse (63 percent) (Bronson, Stroop, Zimmer, & Berzofsky, 2017). More than one-quarter of jail inmates (29 percent) were identified as having a mental or behavioral health condition. This is higher than the percentage of jail inmates nationally, which met the threshold for serious psychological distress (26 percent) and among the general population nationally (5 percent) (Bronson & Berzofsky, 2017). Among county inmates identified as having a mental or behavioral health condition, most (80 percent) also had a co-occurring history of substance abuse.

Table 4.27.
Prevalence of Mental or Behavioral Health Conditions and Substance Use Histories among Jail Inmates in Prince George's County, 2018

	Percentage
History of substance abuse	90
Mental or behavioral health condition	29
Among those identified as having a mental or behavioral health condition, percentage with co-occurring history of substance abuse	80

SOURCE: Community Corrections Division within the Prince George's County Department of Corrections, 2019.

NOTES: In 2018, the Prince George's County Department of Corrections processed 9,781 intakes, with an average daily jail census of 885 inmates. The median age of inmates was 25 years old and most were male (95%), Black (83%), and repeat offenders (85%).

For formerly incarcerated residents re-entering the community, the Bridge Center at Adam's House offers a variety of services to support stability in the community. This joint effort by the Department of Corrections, Health Department, Department of Social Services, and Department of Family Services offers a variety of services, including food assistance, job training, GED preparation, mental health counseling, and transportation assistance.

Law Enforcement

Although the police and sheriff do not provide health care services, these departments are frequently interacting with people with mental or behavioral health conditions and substance use disorders, as evidenced by high percentages of inmates in the correctional facility with these

conditions. Law enforcement agencies are increasingly working with the health care system and pursuing collaborative community-wide strategies to implement effective policing strategies for people with behavioral health conditions (Council of State Governments Justice Center, 2019). In Prince George's County Police Department (PGCPD), all newly recruited police officers receive crisis intervention training. This training is intended to help officers to improve safety of encounters and divert people with behavioral health conditions from the criminal justice system to get treatment. Annual in-service trainings for PGCPD also include mental health topics, including training on suicide awareness. Additionally, in August 2019, PGCPD partnered with several community stakeholders to cohost a daylong training focused on how to better identify, interact with, and accommodate persons with intellectual and developmental disabilities in the justice system.

Multiple law enforcement agencies work throughout the County. Examples of these include the Maryland State Police, Maryland-National Capital Park Police, the University of Maryland's Police Department, and police forces operated by municipalities. Therefore, it is important to also understand the roles of each entity in addressing health and the health-related training received by each entity.

The study team was unable to obtain data on the number of police interactions with people with behavioral health conditions. Detailed individual level data about police interactions with people with behavioral health conditions is infrequently collected, and when collected is often missing information or has inconsistently recorded information, a challenge noted in a recent report focused on the behavioral health system in Baltimore (Human Services Research Institute, 2019).

Schools

In Prince George's County, school-based health care is delivered at school-based wellness centers located in four high schools and by health care and social services-related professionals across Prince George's County Public Schools (PGCPS).

School-Based Wellness Centers

PGCPS has school-based wellness centers located in four high schools (among the 22 high schools in PGCPS): Bladensburg, Northwestern, Fairmont Heights and Oxon Hill. The centers are staffed by the County's Health Department and offer medical treatment, prescriptions for medications, reproductive health care, and mental health counseling. Parents must provide permission for students to receive services and participate in programs offered. The centers accept medical insurance. Students and families who are under-insured or uninsured are billed on a sliding-fee scale based on family size and income. Students are not denied services due to an inability to pay.

The staffing across all four health centers is described below in Table 4.28. During the most recent two school years, the school-based wellness centers have had staffing vacancies for nurse practitioners (NPs). Additionally, it took until the fourth quarter of 2019 to fill all four social worker positions during the 2019 school-year.

Table 4.28.
Staffing of School-Based Wellness Centers

At End of School Year	FTE Staffing	FTE Vacancies
2017	4 Nurse Practitioners (NP), 4 Clerks	0
2018	4 NPs, 4 Social Workers, 4 Clerks	1 NP
2019	2.5 NPs, 4 Social Workers, 4 Clerks	1.5 NPs

SOURCE: Prince George's County Public Schools, 2019.

NOTES: Data was provided directly from the Office of Special Education and Student Services and are not publicly available. FTE, full time equivalent.

Health Care Services in Schools

PGCPS strives to employ one full time equivalent (FTE) registered nurse (RN) at each school. Some schools may have both an RN and a licensed practical nurse due to medical acuity and population size. At the end of the 2019 school-year, PGPS employed 197 FTE RNs and 21 FTE licensed practical nurses (Table 4.29). Additional staff offering assistance with health care or social services included school counselors, psychologists, social workers, and pupil personnel workers.

Table 4.29.
Staffing of Health Care and Social Services-Related Professionals Across PGCPs at End of School Year 2019

Type	Total FTE
School Counselor	371
Registered Nurse	197
Psychologist	92
Pupil Personnel Workers	49
Licensed Practical Nurse	21
Social worker (support special education services)	8

SOURCE: Prince George's County Public Schools, 2019.

NOTES: Data was provided directly from the Office of Special Education and Student Services and are not publicly available. FTE, full time equivalent; PGCPs, Prince George's County Public Schools.

During the 2018-2019 school year, PGCPs students made 479,727 visits to school nurses. The average number of weekly sessions with school counselors varied by student age: elementary schools = 8-10 weekly sessions; middle schools = 15-20 weekly sessions; and high schools = 25-30 weekly sessions. PGCPs student experience a variety of health conditions, including heart conditions, cancer, leukemia, transplants, and other rare conditions that require extra attention. The five most common health conditions for PGCPs students are (1) asthma, (2) attention-deficit/hyperactivity disorder (ADHD), (3) diabetes, (4) sickle cell disease, and (5) seizure disorders.

New Community Schools Initiative

Following passage of Maryland Senate Bill 661 in May 2019, the state established "community schools," which are intended to provide an integrated focus on education, health and social service needs, youth and community development, and community engagement. Schools are designated as community schools if 80 percent or more of students are eligible for free

or reduced price meals. In Prince George's County during the 2019-2020 school year, there were 45 schools designated community schools, of which most were elementary schools. These schools were allocated funds from the state to cover hiring of a Community School Coordinator and wrap around services for students (e.g., extended learning time, vision and dental services, enhanced behavioral health services, language, workforce development training, among others). As the initiative is still in its first year of implementation, further information about services received and activities pursued is not yet available.

Health and Human Services

The health and human services departments in Prince George's County play a key role in helping residents obtain health insurance, helping residents access care, and providing health care services.

Case Management and Assistance Accessing Health Care

The County's Department of Social Services (DSS) actively helps residents sign up for health insurance and navigate services that contribute to overall well-being. DSS pursues a client-driven approach, which seeks to address all of a client's needs via care management and care coordination activities. Many clients have multiple co-occurring needs, such as homelessness and behavioral health. This attention to providing "wrap around" services includes offering a variety of types of assistance, including helping obtain needed health care services, address food insecurity, and helping families struggling with eviction or foreclosure to avoid homelessness.

In terms of health insurance, Prince George's County Health Connect, operating from within DSS, is the consumer assistance organization that helps residents obtain health insurance via the state's insurance marketplace, the Maryland Health Benefit Exchange. Prince George's County Health Connect helps residents by providing information about insurance options and costs and also providing enrollment assistance. In 2019, there were 22,674 qualified health plans in the county (Table 4.30), which was slightly more than in 2018 (22,424) and slightly less than in 2017 (24,226).

Table 4.30.
Enrollment in Qualified Health Plans via the Maryland Health Benefit Exchange, 2017–2019

	2017	2018	2019
Prince George's County	24,226	22,424	22,674
Baltimore County	21,487	20,603	20,547
Howard County	9,403	9,506	9,458
Montgomery County	41,983	41,585	41,763
Maryland	157,637	153,571	156,963

SOURCE: Maryland Health Benefit Exchange, 2019; Maryland Health Benefit Exchange, 2018.

NOTES: Qualified health plans are those plans that cover all mandatory benefits described in the Affordable Care Act and are eligible to be purchased with a tax credit.

The County health and human services agencies operate a variety of medical assistance programs that are intended to help families obtain health insurance, reduce barriers to accessing health care, and promote receipt of needed care. For example, DSS helps residents to sign up for public health insurance programs (i.e., HealthChoice, Maryland’s Medicaid program and Maryland Children’s Health Program) and helps residents to understand their benefits and access care. New and re-applications for the medical assistance program have increased over-time, from 11,748 in 2016 to 16,158 in 2019 (Table 4.31).

Table 4.31.
New and Re-Applications Received and Approved for Medical Assistance in Prince George’s County, 2016–2019

	2016	2017	2018	2019
Applications received	11,748	12,006	14,458	16,158

SOURCE: Prince George’s County Department of Social Services, 2019.

NOTES: Data provided directly from DSS to RAND in August 2019. Applications include new and re-applications and do not include redeterminations of existing applications.

To help access care, the County offers assistance locating providers and helping to address barriers related to transportation. The Health Department operates the Medical Assistance Transportation Program, which provides transportation for eligible Medicaid-enrollees to non-emergency medical appointments, and offers home-visits and evaluations from nurses for eligible residents, including those at risk of institutionalization.

Health Care Services Offered by the Health Department

The Prince George’s County Health Department promotes and protects residents’ health by educating residents about health, offering direct services (e.g., outpatient substance abuse treatment and prevention services and HIV testing), and by connecting residents to health care services.

Through its Family Health Services program, the Prince George’s County Health Department, operates a variety of programs providing direct services to residents. Within the Health Department in Cheverly, Maryland, the following services are offered:

- Dental care: focused on serving high risk populations who encounter barriers to dental care, including uninsured children, publicly insured children, and publicly insured pregnant women. The clinic offers comprehensive dental care, inclusive of both preventive and restorative treatments.
- Family planning: Services include pregnancy testing, HIV Testing, birth control, emergency contraceptives, and reproductive examinations. Services are available to men and women. Insurance is accepted and fees are assessed using a sliding scale based on income.
- For persons living with HIV/AIDs, low-cost services are provided, including health assessments and treatment planning, dental services, mental health services, case management, and substance abuse counseling.
- For refugees, asylees, and individuals in the Special Immigrant Visa program, free care is provided, including health assessments, mental health screenings, follow-up care, and vaccinations for individuals <18 years.

- Screening and treatment for sexually transmitted infections.
- Testing for tuberculosis and, for those infected, directly observed therapy.
- The Special Supplemental Nutrition Program for Woman, Children and Infants (WIC) provides food, nutrition education, nutrition monitoring, and referrals to health care for eligible families.
- Vaccines: Influenza vaccinations and routine vaccinations for children who are uninsured or under insured.

Additional services provided at a different site of care include the Healthy Teens and Young Adults Program, which is focused on preventing pregnancy and promoting reproductive health and adolescent health. Fees are assessed using a sliding scale based on income.

As described above, the Health Department offerings HIV testing and care coordination for persons living with HIV/AIDS. For performance monitoring purposes, the department tracks the number of HIV tests performed annually (5,140 in 2018) and the percentage of newly diagnosed HIV positive patients who are linked to care (50 percent in 2018), as reported in Table 4.32.

Table 4.32.
HIV Testing and Care Linkages Completed by the Prince George’s County Health Department, 2015–2019

	2015	2016	2017	2018 (estimated)	2019 (projected)
HIV tests performed, n	9,024	6,823	5,643	5,140	5,140
Newly diagnosed HIV positive patients who have a documented linkage to care, %	44	31	44	50	54

SOURCE: Prince George’s County, 2019d.

NOTES: Denominators not publicly available. Each year represents a fiscal year. *Goal is to reach 3,500 residents.

**Goal is to reach 330,000 residents.

Behavioral Health Services Offered by the Health Department

Behavioral health services offered by the Health Department include educational activities, assistance with finding care, and direct services.

The Health Department operates several programs focused on spreading information to residents about the consequences of alcohol and drug misuse and reducing tobacco use. Additionally, to combat drug overdoses, the County offers free training on use of naloxone, which is used to reverse an opioid overdose, and a free intranasal naloxone kit.

Assistance with help finding behavioral health services is provided through the Local Behavioral Health Authority, within the Health Department. The Local Behavioral Health Authority helps residents locate care for different types of treatment needs (e.g., outpatient, residential, case management) and for different types of populations (e.g., uninsured, children, seniors). Additionally, the Authority oversees the planning, managing, and monitoring of the County’s public behavioral health system, the term used to describe behavioral health paid for by public funds (primarily Medicaid and Medicare).

The state of Maryland offers crisis lines (phone and text) staffed by specialists for individuals who are experiencing a mental health or substance use concern. Additionally, outpatient substance use disorder treatment services and mental health counseling are provided to residents by the Behavioral Health Division of the Health Department. This division reports high rates of clients receiving appropriately documented progress in achieving care, treatment, or service goals (94 percent in 2018) and mental health clients receiving community-based treatment who were diverted from institutional placement (98 percent in 2018) (Table 4.33).

Table 4.33.
Metrics for Services Provided by the Health Department in Prince George’s County, 2015–2019

	2015	2016	2017	2018 (estimated)	2019 (projected)
Clients with appropriately documented progress in achieving care, treatment, or service goals, %	96	93	95	94	95
Mental health clients receiving community-based treatment who were diverted from institutional placement, %	60	92	93	98	95

SOURCE: Prince George’s County, 2019d.

NOTES: Denominators not publicly available. Each year represents a fiscal year. *Goal is to reach 3,500 residents.

**Goal is to reach 330,000 residents.

Stakeholder Insights

Accessibility of the broader health system, particularly for health and human services, was a common theme throughout stakeholder discussions. Stakeholders’ concerns primarily centered around primary care, including availability, infrastructure, and access for vulnerable populations; social supports for accessing primary care; and mental and behavioral health.

Primary Care and Pediatric Services

Stakeholders noted there is an **insufficient supply of primary care providers**. This was noted as both a geographic-shortage, as providers are not well distributed geographically and some areas of the County have few primary care providers, and also a population-based shortage, because there is an insufficient supply of primary care providers that care for the uninsured or for persons with Medicaid. Stakeholders shared that this lack of primary care providers serving these vulnerable populations puts a heavy burden on hospitals and emergency departments to provide care or often forces people to leave the County to seek care.

Insufficient supply of pediatric providers was also noted. We heard that many residents travel to neighboring jurisdictions, such as Washington, DC, for children’s health care. As described by one resident,

My son and a lot of our babies are affiliated with the children’s hospital in DC. If you need a specialist, you need to go to DC. Why can’t they come here? The children’s hospital needs a bit of competition, so we don’t need to rely on them. Maybe UMD needs their own children’s hospital.

Additionally, stakeholders indicated that there is a perception that there are few immunization clinics in the County and that this limits family’s abilities to obtain neighborhood-based preventive care. School-based screenings were proposed by stakeholders as a potential option for obtaining preventive care for families with transportation limitations that impeded access to outpatient provider services. However, we heard from stakeholders about the financial challenges encountered by the County’s school-based wellness centers. Since 2010, budget cuts have led to cuts in the services offered and hours of operation. Although services are being extended to all PGCPs students during the 2019–2020 school year, financing appears to be an ongoing concern. Further, a stakeholder also indicated that there are challenges in attracting and retaining nurses because the salaries are much lower than those offered in the community.

Access was noted as a challenge for vulnerable populations. Accessing care is difficult due to the size of the County, especially for seniors and those who are homebound and may have difficulty with transportation. Residents were concerned about the availability of affordable health care options for people who were uninsured or under-insured. It was noted that some individuals with incomes above that of the Medicaid threshold still may not be able to afford private insurance and as a result, forgo primary care or other essential preventive services. This was noted as particularly problematic for vulnerable populations such as seniors and immigrants. Access to specialty care for individuals with Medicaid was reported as a challenge. Finally, dental care was noted by several residents as being cost-prohibitive since it is not covered by many insurance plans, including Medicare and Maryland's adult Medicaid program. We heard that many residents have to travel to the University of Maryland for dental care, where they experience extreme wait times for care. This was particularly a problem for persons with disabilities, who have difficulty accessing dentists who may be able to address special needs, such as the need for supplemental anesthesia for procedures. These comments resonate with findings from secondary data showing high rates of ED visits for non-traumatic dental care.

Stakeholders acknowledged County efforts via the University of Maryland Capital Region Hospital to expand health services in the County, but expressed concern that this health care development may not lead to health improvements in the County. For example, stakeholders noted that this health care development was unlikely to address barriers related to **residents' lack of awareness of services and lack of experience/knowledge about how to navigate services**. Stakeholders mentioned there is a need to increase residents' knowledge about existing health care outreach services and noted that community health workers can help facilitate this connection, but are underutilized.

In focus groups, residents noted their interest in having health care providers who reflect the community's demographics and who provide a holistic approach to health. Given the racial and ethnic diversity of the County, **culturally competent care is important**. Residents also noted an interest in providers and health centers that offer education about healthy eating, exercise and chronic disease management.

Coordination Across Health Care and Social Services

There was recognition from stakeholders that the balance between the provision of traditional medical services and social services was not optimal in the County – specifically that basic **social services are less available than health care services**. Stakeholders noted that for health care services to be most effective, they should be supported by social services.

Stakeholders shared that in many cases, some of the needs faced by people seeking health care services are not solely health care, but often other human and social service needs that may have an impact on health. For example, the County's EMS may respond to incidents related to human services needs, however paramedics only have the option of taking the patient to the hospital or letting them refuse care. We learned that the Prince George's County Fire and EMS Department has sought to be attentive to this through its Mobile Integrated Health Program. Through this program, paramedics work to coordinate human services needs for a subset of high utilizers of EMS services, such as linkage to case management, housing and food assistance programs. As a result, we heard there has been a reduction in EMS and ED use among this population.

Additionally, stakeholders noted the need for an improved system when transitioning patients from acute care settings, particularly those patients with a variety of human and social service needs. It was noted that there are **difficulties in coordinating care across multiple health care and social service providers** following a patient's discharge. One respondent shared,

If a person has needs based on social determinants and clinical needs [...] when a person steps out of the hospital 19-20 people might be involved in one person's social needs, but none [of the services] are coordinated.

One stakeholder noted a major limitation to the provision and coordination of services for seniors is **funding**. Many County services for seniors are grant funded, and because of this, it is often hard to initiate innovative ideas to improve senior services. Stakeholders discussed that many senior wellness services could potentially be funded by Medicare or Medicaid but often agencies that focus on social services, that are not directly related to the provision of health care, do not have the capacity to bill public insurance.

Mental and Behavioral Health

As noted in the prior chapter, mental and behavioral health was frequently mentioned by stakeholders as an important health need in the County, and especially for special populations such as children and adolescents, inmate and returning citizens, people experiencing homelessness, and persons with disabilities.

In the areas of health care services, stakeholders shared concerns about the **inadequate numbers of mental and behavioral health providers**, noting that many do not accept insurance. It was also mentioned that there is an insufficient number of mental and behavioral health beds and residential mental and behavioral health facilities. Some stakeholders felt that this was an issue that will persist with the new University of Maryland Capital Region Hospital. It was noted that the new hospital will have only 28 behavioral health beds with six beds for medical detoxification. Moreover, capacity concerns in the hospital were mentioned as it was assumed the hospital will encounter high demand given its accessibility to the metro. Substance use services and beds for co-occurring conditions were also noted as being limited in capacity. One stakeholder shared,

I've worked with a number of people trying to recover from addiction, and it's hard to find services without insurance. It's a big hole. It's heartbreaking because you catch them at a time when they truly want to get help.

Stakeholders noted there were even fewer mental and behavioral health providers available for traditionally vulnerable populations, such as children, persons with severe mental illness, people experiencing homelessness, and returnees. For **children**, there is a concern that there are no child or adolescent mental and behavioral health beds in the County, and thus children have to be transferred to the Psychiatric Institute of Washington in DC. It was noted that children may wait for inpatient beds for prolonged periods in EDs, which may add additional trauma complicating their illness. Stakeholders expressed concerns that there were few services available for children and youth with behavioral health issues, and that there is a great need for a continuum of services (i.e., early intervention, prevention, treatment, and aftercare/follow-up). General concerns about mental and behavioral health and children also were noted. Stakeholders indicated that there is a need for more mental and behavioral health services in

PGCPS, indicating that mental health counseling services for children in the school environment were limited. Stakeholders remarked that children have significant mental and behavioral health needs, especially given the prevalence of bullying and depression in the school-aged population. Participants expressed the desire for more wellness centers at schools that foster mental health, including staff specially equipped for mental health counseling. One noted,

Our teachers are struggling to manage educating children who are distracted with the worries of life.

For **persons with severe mental illness**, who need more intensive services than those provided in the traditional outpatient setting, stakeholders expressed concern about the limited availability of community-based treatment options. There is only one contracted Assertive Community Treatment (ACT) team in the County. ACT is a team-based treatment model to support persons with severe mental illness, which offers multidisciplinary and flexible treatment and supports. One stakeholder noted that although an ACT team may have a high startup cost, it can be self-sustaining since it can bill Medicaid once operational.

Stakeholders also noted concerns about **inmate and returnee populations**. Within the inmate population, stakeholders indicated that mental and behavioral health needs are very common, along with substance use disorders, HIV, and other co-occurring physical illness. As one stakeholder explained, approximately 30 percent of the inmate population is now on a psychotropic medication, noting that this does not include those inmates who refuse treatment. Despite need, stakeholders noted that many returnees do not receive needed care. One stakeholder perceived,

For a lot of people...the jail is the only place that they are receiving treatment.

It was further noted that lack of care may be due to the lack of skilled clinicians available to treat this population or because of individuals' resistance or reluctance to get services.

As there is a high population of inmates with mental and behavioral health needs, access to mental health services is a challenge for returning citizens. Stakeholders noted that while inmates are in the care of the Department of Corrections (DOC), they receive human services and access to mental and behavioral health providers. Upon release, however, there may be lapses in medication, which may lead to an acute crisis resulting in re-arrest. As one stakeholder noted, under the current system, when police are called for someone with a behavioral health crisis, the two options are to take him or her to a hospital or to jail—and often taking the individual to the hospital can be much more time-consuming for an officer. It was noted that there are currently no psychiatric diversion options in the County that can help individuals with histories of mental and behavioral health diagnoses avoid arrest. A stakeholder shared a view,

On the back end, people come in, may get on medication but then they don't get any medications on release. As a result, within 30 days they are back arrested again.

One stakeholder noted that courts tend to focus on sentencing and forensic-related guidelines, but that it is important for them to also take into consideration health needs, such as access to outpatient primary care and behavioral health services, in the counseling phase.

Stakeholders noted challenges faced by formerly incarcerated individuals seeking to reintegrate into society. Upon reentry, stakeholders noted the **need for linkage to services that address health and the human service needs**, such as mental and behavioral health care and

housing. Although case management is offered to individuals through the DOC, stakeholders felt these services are limited. It was noted that upon anticipation of release, an effort is made to ensure that services will be available upon reentry. Release, however, often occurs with limited advanced notification making it difficult for such coordination to be initiated.

Limited geographic availability of reentry services that provide linkages to human and health care services was noted as a challenge in the County. One stakeholder shared that, Adams House in Suitland, a re-entry center, helps to provide linkages to a number of human and health care services, such as health care, employment and housing support. The stakeholder noted it would be helpful to also have reentry services in other parts of the County, such as in the North or South County, as individuals may have difficulty accessing the center from more remote areas due to limited public transportation options.

Many returnees have complex medical, mental, and behavioral health needs as well as housing needs. It was noted that it is particularly challenging for this population to obtain transitional housing. It was noted that since a number of returning citizens experience homelessness, they often have immediate housing needs. As one stakeholder noted, the Department of Housing and Urban Development (HUD) has shifted the focus to the provision of permanent housing options for people experiencing homelessness rather than transitional and emergency shelter programs. However, obtaining permanent housing is often not attainable immediately for people experiencing homelessness upon release. One stakeholder shared what they believed to be a driver of this challenge in the County,

20 percent of people who are incarcerated are homeless [however] the County only has a 50-bed shelter for men and no women's shelter.

Summary

Several key themes emerged from the primary and secondary data used to describe health care systems in Prince George's County.



Highlighting Key Unmet Needs

- Ongoing challenges in access to primary care, evidenced by inefficient use of EDs for preventable conditions and EMS for non-urgent needs.
- Lack of access to primary care may be driving some of the racial/ethnic inequities in health and ED use. In District 7, where more than 3 in 4 residents are Black, ED visit rates are high for conditions better managed in primary care settings, like diabetes, heart disease, and hypertension for adults and asthma for children.
- Challenges in obtaining dental care exist, particularly for residents with lower incomes, less education, and who are not White.

First, **access to health care** remains a problem in the County. A variety of factors are likely to be creating barriers to care. Some of these factors may include lack of insurance, health literacy, and cultural competency of the health care delivery system. As was noted in Chapter Three, Prince George's County had the highest uninsurance rate in Maryland in 2019. And while some uninsured residents may be eligible for coverage via public programs or the state health insurance exchange, some residents, such as undocumented immigrants, are not eligible for these insurance programs. Health insurance coverage in the county is discussed in more detail in the next chapter. Further, about half of adults in Prince George's County (51.7 percent) have above basic health literacy, with variation observed across districts, which may make it more difficult for many residents to initiate and navigate care. Finally, stakeholders noted a desire for having culturally competent health care providers, emphasizing the need to have providers who reflect the County's demographics.

Workforce shortages and unequal distribution of healthcare providers are also likely to be creating barriers to care. Challenges in accessing primary care services was noted by stakeholders and confirmed by the data, as nearly all districts have some communities designated as having a shortage of primary care providers. Moreover, there are pronounced racial and ethnic disparities in access and utilization of health care services. Lack of access to primary care may be driving some of the racial/ethnic inequities observed in utilization of the ED for potentially preventable conditions. For example, rates of asthma-related ED visits and inpatient hospitalizations were more than four times higher for Black and Hispanic children compared to White children. Asthma is best managed in primary care settings, but children who visit EDs for care often lack a usual medical provider or may not have adequate access to needed medications (L. Johnson, H. et al., 2016). Further, Black adults had high rates of ED visits and inpatient hospitalizations for conditions associated with metabolic syndrome, including heart disease, hypertension, and diabetes, which are also best managed in primary care settings.

Challenges in accessing dental care were also observed. Although there are few dental HPSAs in the County, rates of dental visits in the past year varied considerably by household income level and educational attainment. Further, our analyses suggest that many adults lack a usual source of dental care and are using the ED to treat dental conditions best cared for in a dental office. A variety of reasons may lead to inappropriate use of EDs for dental care, including cost, fear, and knowledge and opinions about oral health and dental care. Overall, lack of access to dental care appears to be a major issue for Black adults in the County.

Additionally, many stakeholders raised concerns about the supply of mental and behavioral health providers and access to mental and behavioral health services. While few communities in the County are designated as mental health HPSAs, we frequently heard about the challenges in accessing mental and behavioral health services for vulnerable populations, such as children and adolescents, individuals with severe mental illness, and reentering populations. County rates of adult ED visits for behavioral health conditions were more than double that of visits for heart disease and nearly four times greater than the rates of visits for diabetes. To address this concern, stakeholders suggested offering more mental and behavioral health services in schools and providing more coordinated health and human services to formerly incarcerated individuals. Additionally, stakeholders noted a need for a continuum of services for children with behavioral health needs, to be inclusive of early intervention, prevention, treatment, and follow-up.

Second, there is **system confusion** as evidenced by use of inappropriate health care systems. One example of this is the amount of calls for non-urgent medical services received by EMS. The majority of 911 calls for EMS (80.3 percent) resulted in the provision of medical services, and about one in four of these calls were considered to be for non-urgent medical services. Because EMS agencies provide an entry way into EDs, they are also a key entity of the health care system for helping to reduce the number of ED visits that are treatable outside EDs. There are ongoing efforts throughout the country (Gregg et al., 2019), including in Prince George’s County and elsewhere in Maryland, to reduce the misuse of EMS through mobile integrated health interventions, which involve partnerships across health and human service agencies and helping residents connect to primary care services (Maryland Institute for Emergency Medical Services Systems, 2018). Another example of system confusion within health care is the use of EDs for preventable conditions. As noted above, we observed high use of EDs for preventable conditions, such as asthma and nontraumatic dental care, which are best cared for in primary care settings. Thus, addressing this system confusion requires system-level interventions to facilitate access to care, but also individual-level interventions to educate residents about the role of different types of providers and when to call 911.

Finally, the health care delivery system in Prince George’s County includes more than just hospitals and other traditional medical providers. Collaboration across multiple agencies is a growing and important part of health care delivery in Prince George’s County. Health and human services agencies in the County play a key role in helping residents enroll in health insurance and providing health care services for those who remain uninsured. Additionally, public health plays a key role in disease surveillance and health promotion—activities that are key drivers of both population- and individual-level health outcomes. Stakeholders noted significant behavioral health needs for children, suggesting that expanding the role of school-based wellness centers and other healthcare providers at schools may help address this need. Additional examples of collaboration and coordination include the PGCPD’s approach to training on policing strategies for persons with intellectual and developmental disabilities and other behavioral health conditions and in the cross-sector collaboration, Bridge Center at Adam’s House, which offers mental health counseling, and a variety of additional services (e.g., food assistance, job training, GED preparation, and transportation assistance) to formerly incarcerated persons reentering the community. Many County agencies are already working together to address health care and health and these efforts can be leveraged and extended for additional benefit.



Next Steps in Data Collection and Analysis

Despite important insights from available data on health care access, utilization, and workforce, there are known limitations. Information on use of primary care is not readily available at the county- or sub-county level. The BRFSS provides some self-reported information, more data would be useful to understand use of primary care in the County. Several states maintain comprehensive All Payer Claims Databases, which facilitates this type of analysis. Claims data is also essential for measuring quality of care, a metric that is not examined in this report. Additionally, the County’s 2019 CHNA offers a glimpse of ED and hospital utilization data using only Maryland data, which misses residents’ utilization of care outside of the state. Future CHNAs should be allocated sufficient resources to obtain all needed utilization data.

5. Drivers of Health: Social and Economic Environment

Background

The social and economic environments are key drivers of health and well-being. Importantly, these drivers of health have been influenced by historical and systemic inequities which continue to take a toll on health and well-being to this day. For example, racist practices in mortgage lending and subsequent rates of home ownership, a key mechanism of building wealth in the United States, have influenced rates of poverty in families and communities for generations. Because the financing of public schools is partially based on local property taxes, inequities across property values can have ripple effects in the education of youth. Studies report that low incomes, neighborhood safety, and limited education are associated with poor health outcomes (Mayne et al., 2018; Vásquez-Vera et al., 2017; Walker et al., 2014). These factors play a role in health and well-being due to their associated consequences on health care access, lifestyle and behavior choices, and stress. For example, educational attainment is related to employment opportunities. Working conditions, work-related resources, and income can consequently have influences on health due to their relationships with work hazards, health insurance, or housing options, respectively. Additionally, exposure to public safety factors, such as neighborhood violence, is associated with poor health and unhealthy behaviors (i.e., smoking, not exercising, and poor sleep) and psychological distress (Curry, Latkin, & Davey-Rothwell, 2008; S. Johnson, L. et al., 2009).

In this chapter, we describe the social and economic environments within the County.



Key data used in this chapter include information from RWJF's County Health Rankings, the American Community Survey, Bureau of Labor Statistics, Annual Report on Homelessness, Maryland State Department of Education, and the Maryland Department of Information Technology, among other County department sources.

We highlight key indicators related to

- Poverty
- Educational attainment
- Employment
- Safety.

We describe how trends in these indicators have changed over time. Additionally, we explore how the social and economic environment influences two populations: **seniors and people experiencing homelessness**.

County Health Rankings: Social and Economic Factors

As has been described previously in this report, the RWJF ranks county health performance across the United States (County Health Rankings, 2019c). As part of this, counties are ranked on social and economic factors (inclusive of measures of education, employment, income, family and social support, and community safety). Prince George's County (Table 5.1) improved its ranking on social and economic factors, moving from 16th in 2017 and 2018, to 13th in 2019. The improved ranking appears to be driven by the decline in the violent crime rate and an increase in the high school graduation rate (these topics are explored in depth later in this chapter).

Table 5.1.
County Health Sub-Rankings for the Social and Economic Factors, Prince George's County 2010–2019

Year	Social & Economic Rank
2010	16
2011	13
2012	16
2013	17
2014	15
2015	16
2016	17
2017	16
2018	16
2019	13

SOURCE: County Health Rankings, 2019b.

NOTES: Possible ranking out of 24 counties in Maryland.

Poverty

Poverty has long been recognized as a contributor to health and disease as it affects a variety of clinical, behavioral, social, and environmental factors that can influence health (Khullar & Chokshi, 2018). In this section, we use data from the ACS to describe rates of poverty, social assistance, and health insurance over time in the County, compared to neighboring jurisdictions, as well as comparing districts within the County. We examine type of health insurance in addition to the other indicators because it is a marker for socioeconomic status, as it is traditionally tied to employment. Further, Medicaid eligibility is primarily based on income, however it is only available to citizens; thus, an assessment of health insurance status is particularly relevant for poor immigrant populations within the County. In addition to describing those data, we describe County services offered to alleviate the negative impacts of poverty.

Since 2014, the County has experienced a decline in the percentage of individuals in poverty along with a decline in the percentage of households participating in the Supplemental Nutrition Assistance Program (SNAP) or receiving public assistance and a decline in the percentage of uninsured residents (Table 5.2).

Table 5.2.
Percentage in Poverty, with Social Assistance, and by Health Insurance Status, 2009–2018

	Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Poverty and social assistance										
Individuals with income below poverty level	7.5	9.4	9.3	10.2	9.8	10.2	9.3	9.1	8.4	8.1
Households with public assistance income	1.8	1.6	1.8	1.8	2.0	1.9	1.7	2.4	1.5	1.9
Households with public assistance or SNAP	7.4	8.3	9.7	10.8	12.0	13.0	11.5	11.0	9.2	8.6
Health Insurance Status										
Uninsured	14.8	16.1	15.0	15.6	15.5	13.0	10.9	10.3	10.1	10.5
Has Medicaid	10.8	12.4	12.4	14.3	14.6	16.8	17.9	17.0	16.4	16.8
Has Medicare	6.2	6.3	6.2	6.2	6.8	7.6	7.6	8.0	8.5	8.8
Has private health insurance	62.0	58.1	60.4	56.9	55.9	55.4	56.2	57.4	57.1	55.8
Has other type of health insurance*	6.3	7.1	5.9	7.0	7.2	7.3	7.5	7.3	7.9	8.1

SOURCE: U.S. Census Bureau, 2019a.

NOTES: Data in table were obtained from the American Community Survey 1-Year Summary Files, 2009–2018. Rates provided for the civilian noninstitutionalized population. SNAP, Supplemental Nutrition Assistance Program. *Other health insurance includes TRICARE/military health, VA Health Care, or another type of health insurance not mentioned in the table.

Compared to nearby counties, Prince George’s County has a higher percentage of individuals living in poverty (8.9 percent) than Howard (5.4 percent) and Montgomery counties (6.9 percent). A higher percentage of Prince George’s County residents are uninsured or insured by Medicaid than observed in nearby counties and the state.

Rates of uninsurance are driven by several factors, including income and eligibility requirements for public programs, like Medicaid. In Maryland, adults (not including pregnant women) are only eligible for Medicaid if they are citizens and have an annual income less than \$15,363 (with a household size of one). Noncitizens may also be eligible for Medicaid, but must have a “qualified” immigration status and also must wait five years to be eligible for services, per Federal law. Even when noncitizens immigrants are eligible for government-sponsored health insurance or health care programs, many may delay seeking care for fear of deportation or other repercussions.

Although Medicaid is an important program for increasing rates of health insurance among people living in poverty, having health insurance does not guarantee access to care. Research indicates that Medicaid enrollees encounter barriers to care, including challenges finding providers that accept Medicaid, transportation barriers, and concerns about cost (Allen, Call, Beebe, McAlpine, & Johnson, 2017; Garfield, Lave, & Donohue, 2010).

Table 5.3.
Percentage in Poverty, with Social Assistance, and by Health Insurance Status, by County and State, Pooled 2014–2018

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
Poverty and social assistance					
Individuals with income below poverty level	8.9	9.2	5.4	6.9	9.4
Households with public assistance income	1.9	2.3	1.2	1.5	2.3
Households with public assistance or SNAP	10.6	10.8	5.6	6.9	11.2
Health Insurance Status					
Uninsured	10.8	5.6	4.0	7.4	6.5
Has Medicaid	16.7	14.4	8.5	11.7	15.0
Has Medicare	8.1	12.2	8.8	9.9	10.4
Has private health insurance	56.8	61.4	72.0	65.3	60.3
Has other type of health insurance**	7.6	6.4	6.7	5.8	7.8

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014-2018. Rates provided for the civilian noninstitutionalized population. SNAP, Supplemental Nutrition Assistance Program.

**Other health insurance includes TRICARE/military health, VA Health Care, or another type of health insurance not mentioned in the table.

Poverty and receipt of social services varies across the districts (Table 5.4). The councilmanic districts directly north of Washington, DC, (Districts 2, 3, and 5) have some of the highest rates of poverty and utilization of public assistance. High rates of poverty and use of public assistance also are observed in District 7.

Additionally, more than one in ten residents are uninsured, with wide variation in rates of uninsurance observed across districts. In District 2, more than one-quarter (26.0 percent) of residents are uninsured. This district has a sizeable foreign-born population, which may be apprehensive or ineligible for government health insurance programs. These factors may contribute to this high rate of uninsurance.

Table 5.4.
Percentage in Poverty, with Social Assistance, and by Health Insurance Status, by District, Pooled 2014–2018

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Poverty and social assistance										
Individuals with income below poverty level	8.9	9.5	13.5	12.3	4.7	10.1	6.3	11.1	8.2	5.1
Households with public assistance income	1.9	1.8	1.7	2.0	1.3	2.0	2.0	2.5	2.0	1.8
Households with public assistance or SNAP	10.6	8.6	11.5	11.4	5.8	13.8	9.0	17.8	10.2	7.6
Health Insurance Status										
Uninsured	10.8	9.9	26.0	14.0	6.9	11.4	5.1	8.9	10.0	5.5
Has Medicaid	16.7	15.5	25.0	18.9	8.9	22.3	12.3	22.6	15.2	10.6
Has Medicare	8.1	7.7	5.8	6.8	8.9	8.8	8.0	8.3	9.2	9.2
Has private health insurance	56.8	60.9	39.7	56.5	67.7	51.6	65.6	51.9	52.8	62.7
Has other type of health insurance*	7.6	5.9	3.5	3.9	7.6	5.8	8.9	8.4	12.8	12.0

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014-2018. Rates provided for the civilian noninstitutionalized population. SNAP, Supplemental Nutrition Assistance Program.

*Other health insurance includes TRICARE/military health, VA Health Care, or another type of health insurance not mentioned in the table.

Another way to measure economic need is via students' participation in the National School Lunch Program. This program provides free and reduced price meals to students based on income eligibility guidelines. During the 2016–2017 school-year, 63 percent of PGCCPS students were eligible for free and reduced price meals (Table 5.5), which was greater than the state average of 45 percent, and greater than that of neighboring counties of Montgomery (35 percent) and Anne Arundel (33 percent). The percentage of students receiving free and reduced price meals has been increasing in Prince George's County, nearby counties, and in the state (Figure 5.1). In Prince George's County, eligibility for the National School Lunch Program increased from 48.0 percent in 2008 to 63.7 percent in 2018, which may be driven by changing eligibility standards for the program.

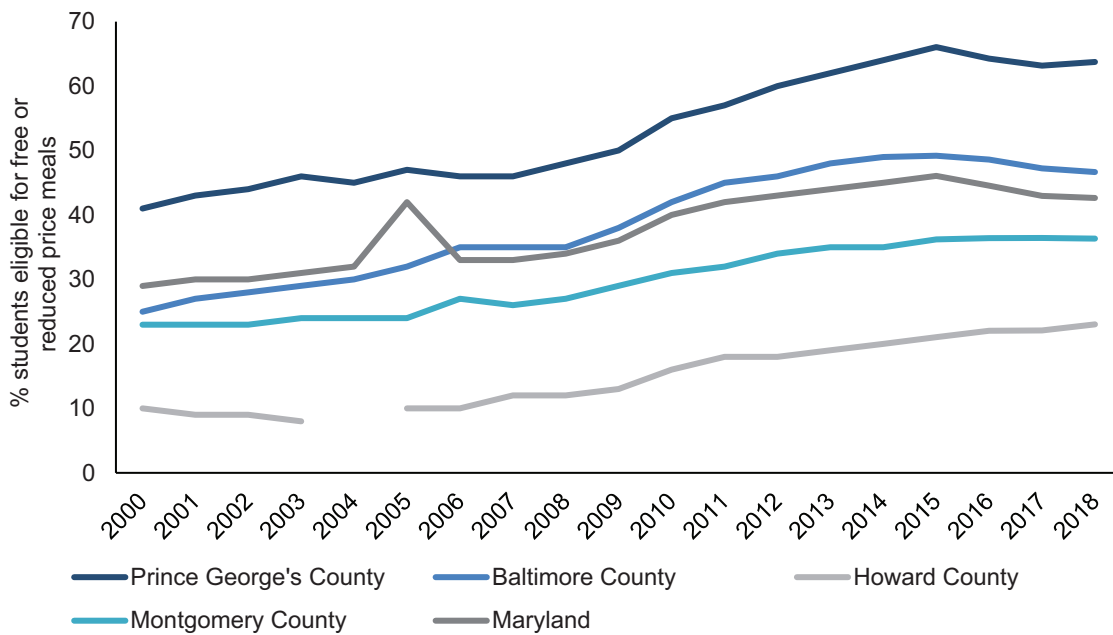
Table 5.5.
Percentage of Students Eligible for Free or Reduced Price Meals, County, School Year 2016/17

	Maryland	Baltimore	Howard	Montgomery	Prince George's
Percent	45	47	21	35	63

SOURCE: County Health Rankings, 2019b.

NOTES: Raw data obtained from NCES 2016-17.

Figure 5.1.
Percentage of Students Eligible for Free and Reduced Price Meals, by County and State, 2000–2018



SOURCE: Annie E. Casey Foundation Kids Count Data Center, 2019.

NOTES: Raw data was obtained from the Maryland State Department of Education School Report Cards, 2000 – 2018. Data not available for Howard County in 2004.

Examples of County Agencies Addressing Poverty

DSS offers social services to residents through over 50 programs. Only a sample of the services and programs offered by DSS are described below. Briefly, some of these programs include:

- **Food Supplement Program:** Formerly known as Food Stamps, this program is part of the federal Supplemental Nutrition Assistance Program (SNAP) and helps low-income households buy food needed to promote health. This program is led by the Family Investment Division.
- **Temporary Cash Assistance:** This program provides need-based supportive services to families with minor children. Applicants are required to seek employment and be involved in work activities from the day they apply. Some eligible families may avoid this work requirement and receive short-term assistance, provided as a one-time lump sum payment. This program is led by the Family Investment Division.
- **Energy Assistance:** The Maryland Energy Assistance Program provides financial assistance with home heating bills. Additional utility assistance programs include the Electric Universal Service Program, which provides financial assistance with electric bills and Arrearage Retirement Assistance, which helps customers with large, past due electric and gas bills. This program is led by the Community Services Division.
- **Emergency Food Assistance Program:** This program provides eligible individuals and families with free food. DSS acts as a clearinghouse for the distribution of donated food, which is then distributed to individuals and families in need by more than 30 local community pantries and shelters in Prince George's County participate in the program. This program is led by the Community Services Division.

In 2019, DSS received 49,014 new and re-applications for the Food Supplement Program, of which 68.8 percent were approved (Table 5.6). In 2019, average monthly caseload included more than 81,000 recipients, or approximately 9 percent of the County population. The average monthly caseload of new and re-applications for the Temporary Cash Assistance program declined over time, from 8,266 in 2016 to 7,224 in 2019. Similarly, the percentage of new and re-applications approved slightly declined, from 25.6 percent in 2016 to 22.8 percent in 2019.

Table 5.6.
New and Re-Applications Received and Approved for Social Services in Prince George’s County, Average Monthly Caseload during 2016–2019

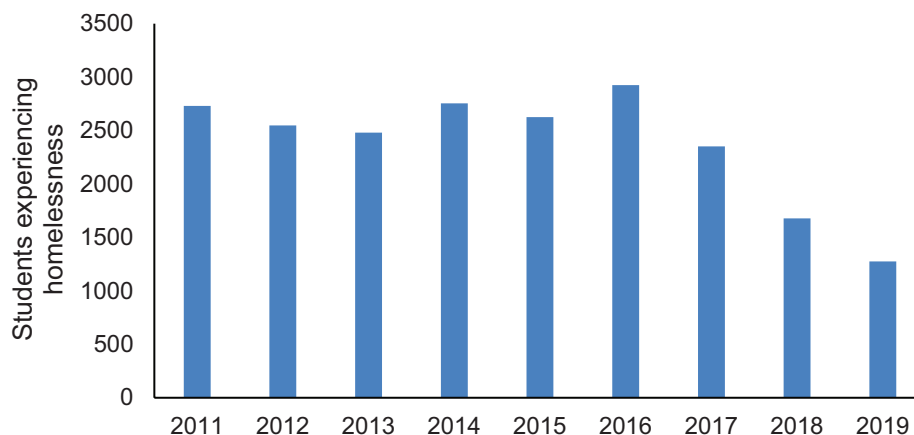
	2016	2017	2018	2019
Food Supplement Program				
Applications received	56,928	52,394	51,291	49,014
% Applications approved	75.4	69.9	71.0	68.8
Temporary Cash Assistance				
Applications received	8,266	7,550	7,620	7,224
% Applications approved	25.6	24.9	25.1	22.8
Energy Assistance				
Applications received	14,683	13,718	14,068	*
% Applications approved	64.4	64.0	65.6	*
Emergency Food Assistance Program				
Applications for individuals received	1,128	1,708	1,659	*
% Applications approved	100	100	100	*

SOURCE: Prince George’s County Department of Social Services, 2019.

NOTES: Data provided directly from DSS to RAND in August 2019. Applications include new and re-applications and do not include redeterminations of existing applications. *Counts not available at time of analysis.

Prince George’s County Public Schools (PGCPS) has experienced a decline in students experiencing homelessness (Figure 5.2). There were 1,275 students identified as experiencing homelessness in 2019, compared to 2,924 students in 2016.

Figure 5.2.
Students Enrolled in PGCPS who were Identified as Experiencing Homelessness, 2011–2019



SOURCE: Prince George’s County Public Schools, 2020.

Schools are expected to meet the basic needs of students, including providing uniforms, field trip waivers, and technology, among other needs. Additional support for students experiencing homelessness comes from several sources, including community partners and grants. The following are examples of how these additional resources help students and should not be considered a metric for overall need of students:

- The McKinney Vento Program, supported by the Federal law that helps to address students experiencing homelessness, receives donations to provide school supplies, clothes, toiletries, and gift cards to local stores (Table 5.7).
- The “Neediest Kids Program” provides coats to students in need. During the 2018–19 school year, 365 coats were provided compared to 206 coats in 2017–18 and 530 coats in 2016–17.
- In partnership with Alice’s Kids, the McKinney Vento Program was able to provide a prom dress, shoes, a manicure and a pedicure, and a graduation outfit for two high school seniors.
- PGCPs, in collaboration with the Latin American Youth Center, offers the Pathways Promotor program at five PGCPs high schools. This program offers intensive case management services to high school students who are identified as experiencing homelessness.

Table 5.7.
Efforts Supported by the McKinney Vento Program to Help Students Experiencing Homelessness, 2016/17–2018/19

Service	2016-17	2017-18	2018-19
Uniform Vouchers	317	236	190
SmarTrip metro cards	243	122	120
Eye-glass vouchers	25	26	1
Coats	392	100	0
Hair cut vouchers	0	41	39
Holiday adopt a family	28	20	47

SOURCE: Prince George’s County Public Schools, 2019.

NOTES: Data was provided directly from the Office of Special Education and Student Services and are not publicly available. While no denominator was provided for these counts, in 2019 Prince George’s County Public Schools had 208 schools and centers more than 130,000 students. These data are not indicative of the overall need of students, but rather are intended to offer examples of how additional resources help students.

Additional examples of County departments addressing poverty were already described in Chapter Four, including the County Health Department’s provision of direct health care services and the DSS’s efforts to help individuals obtain health insurance and attend health care appointments.

Education

Education is a well-established determinant of health and may affect long-term health outcomes by influencing biological aging, improving health literacy, changing health behaviors, and increasing a sense of empowerment (Cohen & Syme, 2013).

The PGCPS is the second largest school district in Maryland and is among the top 25 largest school districts in the United States. (Prince George’s County Public Schools, 2018). PGCPS includes 208 schools, which include elementary schools, high schools, middle schools, special education/alternative schools, academies and dedicated specialty schools, and public charter schools. Students are enrolled in the academies, specialty schools, and charter schools by lottery. The public schools enrolled 132,667 students for the 2018–2019 academic year (Maryland State Department of Education, 2019b). In addition, there are two public universities (University of Maryland at College Park and Bowie State University) and a community college (Prince George’s Community College) in the County.

In response to the Every Student Succeeds Act, signed into law in 2015, the state of Maryland developed a new accountability system which was approved by the U.S. Department of Education in early 2018. The new report card monitors how schools are faring on state assessments, as well as other factors. Report card findings illustrate that school attendance rates are high across all groups and comparable to rates in Maryland schools, overall (Table 5.8).

Table 5.8.
School Attendance Rate by Race/Ethnicity, by County and State, School Year 2017/18

	Prince George’s County	Maryland
Asian	≥95.0	96.4
Black	94.1	92.5
Hispanic	92.5	92.6
White	93.4	94.3
Two or more races	93.3	93.8
American Indian / Alaska Native	93.4	93.2
Hawaiian / Pacific Islander	93.8	94.0
All	93.6	93.5

SOURCE: Maryland State Department of Education, 2019a.

Graduation rate is also included in the new report card. The graduation rate indicator measures the performance of students in a school who graduate with a regular high school diploma. This indicator is comprised of two measures of a cohort of ninth grade students graduating within four years or five years, respectively. Graduation rates vary widely across race/ethnicity in the County, with Asians having the highest graduation rate and Hispanic students having the lowest (Table 5.9). Further, students with special services have lower graduation rates than the County-wide average.

Table 5.9.
Adjusted Cohort Graduation Rate by Race/Ethnicity in Prince George's County, 2018

	4-Year Rate	5-Year Rate
Race/ethnicity		
Asian	93.7	94.5
Black	88.5	90.0
Hispanic	65.9	68.7
White	84.9	85.3
Two or more races	90.4	91.6
American Indian / Alaska Native	*	*
Hawaiian / Pacific Islander	*	*
Special Services		
Students w/Disabilities	71.9	74.1
English Learner	51.1	56.2
All	82.7	84.4

SOURCE: Maryland State Department of Education, 2019a.

NOTES: *Indicates data not available. Report notes that only student groups with 30 or more students are reported. Economically disadvantaged is not available yet.

Academic achievement measures the performance of students in a school who demonstrate proficient skills and knowledge in a student's academic program in Math and English Language Arts, as measured by the Maryland Comprehensive Assessment Program. There is wide variation in proficiency by race/ethnicity, with Hispanic and Black students generally having lower rates of proficiency than Asian and White students. Students with special services have lower rates of proficiency than the County-wide average (Table 5.10).

Table 5.10.
Percentage of Students Scoring Proficient or Higher on State Assessments, Prince George's County, 2018

	Math			English Language Arts		
	E	M	H	E	M	H
Race/ethnicity						
American Indian / Alaska Native	30.9	20.5	38.1	37.0	43.8	61.9
Asian	49.1	40.5	53.0	54.0	56.0	69.9
Black	21.0	16.3	20.6	30.4	32.4	38.2
Hispanic	16.8	12.4	13.1	21.3	24.8	33.8
Hawaiian / Pacific Islander	40.6	29.7	*	47.8	47.6	*
White	43.0	40.9	49.4	50.5	54.9	65.3
Two or more races	33.2	29.1	32.2	50.5	43.6	60.3
Special Services						
Students with Disabilities	7.2	5.5	8.2	6.7	6.2	8.9
English Learner	12.6	3.1	3.9	15.2	5.0	4.9
Economically Disadvantaged	12.9	9.3	10.5	18.6	20.6	28.8
All	21.4	16.8	21.1	28.9	31.6	39.6

SOURCE: Maryland State Department of Education, 2019a.

NOTES: *Indicates data not available; Report notes that only student groups with 30 or more students are reported. E, Elementary; M, Middle; H, High; Students with Disabilities are children eligible for special education services because of a mental, physical, and/or emotional disability; English Learners are students who are unable to communicate fluently or learn effectively in English; Economically Disadvantaged is defined as any student who is directly certified as eligible for free meal benefits using participant data from other means-tested programs.

As shown in Table 5.11, most County residents hold a high school diploma or higher (86.1 percent). Compared to other nearby counties, Prince George’s County has a higher rate of residents without a high school diploma and a lower rate of residents with a bachelor’s degree or higher.

Table 5.11.
Percentage of Population Aged 25 Years and Older, by Educational Attainment, by County and State, Pooled 2014–2018

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Less than high school education	13.5	8.9	4.5	8.7	10.0
High school diploma or equivalent	25.7	26.2	14.0	13.3	24.8
Some college	28.2	26.3	20.2	18.9	25.6
Bachelor’s degree or higher	32.7	38.6	61.4	59.0	39.6

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Educational attainment varies by district (Table 5.12). The lowest educational attainment is observed in District 2, where 33.4 percent of residents have less than a high school education. Districts 1 and 4 had the highest rate of educational attainment, where 41.8 and 48.1 percent of residents, respectively, have a bachelor’s degree or higher.

Table 5.12.
Percentage of Population Aged 25 Years and Older, by Educational Attainment, District, Pooled 2014–2018

	County Councilmanic District									
	PG	1	2	3	4	5	6	7	8	9
Less than high school education	13.5	13.2	33.4	21.4	6.4	14.6	6.2	12.1	10.8	6.9
High school diploma or equivalent	25.7	19.7	24.1	23.0	18.8	29.7	24.0	37.2	27.2	28.1
Some college	28.2	25.3	20.3	24.5	26.7	27.7	31.2	33.5	32.2	31.5
Bachelor’s degree or higher	32.7	41.8	22.2	31.1	48.1	28.0	38.6	17.2	29.8	33.5

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Not captured in the tables above, but equally important, are measures related to use and availability of early childhood education. PGCPS offers several early childhood education programs for children aged two to younger than five years old, generally for families with lower incomes and children with (or at risk of) development delays.

Employment

In the United States, higher income is associated with longer life expectancy (Chetty et al., 2016). In 2015, Prince George's County was described as among the wealthiest Black-majority counties in the United States (Brown, 2015). Using the pooled 2014–2018 ACS, we see that median household income in Prince George's County is similar to the state, but less than Howard and Montgomery counties (Table 5.13). Within the County, median household income is higher for White residents than minority residents (with the exception of Native Hawaiian and Other Pacific Islander residents). Black residents in Prince George's County have a higher median household income than other jurisdictions, excluding Howard County.

Table 5.13.
Median Household Income, by Jurisdiction, Pooled 2014–2018

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
Median household income, \$	81,969	74,127	117,730	106,287	81,868
By race/ethnicity, \$					
White	89,461	79,126	128,594	123,218	90,964
Black	82,695	66,037	91,463	76,056	65,039
American Indian and Alaska Native	68,125	47,386	75,924	79,559	69,955
Native Hawaiian and Other Pacific Islander	111,250	91,875	*	87,500	89,265
Other	63,655	53,363	90,221	65,992	64,028
Two or more races	81,519	63,873	108,839	94,961	77,834
Hispanic	65,838	62,910	92,734	74,621	70,412

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018. Includes the civilian noninstitutionalized population. *Data not available.

In Prince George's County, more than one-quarter (27 percent) of civilians in the workforce are government workers, and 70 percent are private wage/salary workers. The top three industries are as follows: educational services, and health care and social assistance (23 percent), professional, scientific, and management, and administrative and waste management services (15 percent); and public administration (14 percent) (U.S. Census Bureau, 2019b). Maryland's Department of Labor projects significant growth for the health care and social assistance sector across the state, particularly for dental care (Maryland Department of Labor, 2017).

Since 2014, the percentage of individuals in Prince George's County who are unemployed or are working but still living below the poverty line ("working poor") has declined (Table 5.14). In 2018, 5 percent of individuals in Prince George's County were considered working poor and 4.1 percent were unemployed.

Table 5.14.
Percentage who are Unemployed or Working Poor in Prince George’s County, 2009–2018

	Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Individuals who are working poor	4.9	6.4	6.4	6.2	5.9	6.7	5.4	4.9	4.9	5.0
Unemployment rate	6.9	7.5	7.5	7.3	6.9	6.1	5.2	4.5	4.3	4.1

SOURCE: U.S. Census Bureau, 2019a; U.S. Bureau of Labor Statistics, 2019.

NOTES: Unemployment rate was obtained from the Bureau of Labor Statistics’ Local Area Unemployment Statistics. Other data in table were obtained from the American Community Survey 1-Year Summary Files, 2009–2018. Rates provided for the civilian noninstitutionalized population. As recommended by the U.S. Bureau of Labor Statistics, “working poor” is defined as those individuals in the labor force whose incomes fell below the official poverty level, with the labor force defined as those who are currently employed and those who are unemployed and seeking work.

As illustrated in Table 5.15, the percentage of individuals in Prince George’s County considered working poor (5.4 percent) was higher than that of nearby counties and slightly higher than the state (5.2 percent). Additionally, the County unemployment rate was slightly higher than the rates in nearby counties and the state (3.9 percent).

Table 5.15.
Percentage who are Unemployed or Working Poor, by Jurisdiction, Pooled 2014–2018

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Individuals who are working poor	5.4	5.3	3.2	4.2	5.2
Unemployment rate*	4.1	4.0	3.0	3.2	3.9

SOURCE: U.S. Census Bureau, 2019b; U.S. Bureau of Labor Statistics, 2019.

NOTES: *Unemployment rate was obtained from the Bureau of Labor Statistics and represents the October 2019 estimate. Other data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018. Rates provided for the civilian noninstitutionalized population. SNAP, Supplemental Nutrition Assistance Program. **Other health insurance includes TRICARE/military health, VA Health Care, or another type of health insurance not mentioned in the table.

As displayed in Table 5.16, across districts within the county, the highest percentages of working poor live in Districts 2 (7.4 percent) and 3 (8.7 percent). Districts 2 and 3 also had the highest percentage of uninsured residents, highlighting the link between well-paying jobs and health insurance. Unfortunately, the gold standard data source used to measure unemployment, the Bureau of Labor Statistics, does not enable examination at the district level.

Table 5.16.
Percentage who are Working Poor, by District, Pooled 2014–2018

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Individuals who are working poor	5.4	5.5	7.4	8.7	2.8	6.3	3.7	6.6	5.5	2.4

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018. Rates provided for the civilian noninstitutionalized population. SNAP, Supplemental Nutrition Assistance Program. *Other health insurance includes TRICARE/military health, VA Health Care, or another type of health insurance not mentioned in the table.

Safety

Safety is a known driver of health. For example, prior research suggests that exposure to neighborhood violence is associated with poor health and unhealthy behaviors (e.g., smoking, not exercising, and poor sleep) and psychological distress (Curry et al., 2008; S. Johnson, L. et al., 2009). In this section, we describe safety within schools, as measured by self-reported experiences of violence by middle and high school students. We also describe public safety through indicators of violent crime, property crime, death rate by homicide, as well as deaths involving law enforcement.

School Safety

The most recently released Prince George's County School Climate Survey discusses parental concern on school safety (Keane & Swinton, 2017). While 91 percent of parents of elementary school students expressed a positive perception of safety and discipline at their child's school, only 78 percent of parents of middle school students felt the same; 82 percent of parents of students in high school expressed a positive perception of school safety and discipline.

Additionally, the YRBS/YTS provides state and county-level information about middle school and high school students. In 2016, one in four County middle school students reported carrying a weapon to school (Table 5.17). Two in three County middle school students reported having been in a physical fight, which is higher than the overall state rate of 52.3 percent. The rate of County high school students reporting sexual dating violence has declined from 11.5 percent in 2013 to 5.5 percent in 2016. The rate of County high school students reporting physical dating violence has been constant since 2013 at around 11 percent, which is slightly higher than the overall state rate of 9.9 percent in 2016.

Table 5.17.
Percentage of Middle School and High School Students Reporting School Safety Issues and Dating Violence, Prince George's County and Maryland, 2013–2016

	2013		2014		2016	
	PG	MD	PG	MD	PG	MD
School Safety						
<i>Middle School</i>						
Carried a weapon	30.6	29.4	20.0	25.4	25.4	29.2
Been in a physical fight	72.8	54.5	61.2	47.8	65.7	52.3
<i>High School</i>						
Not attended school because they felt they would be unsafe at school or on their way to or from school	11.4	8.8	6.3	6.0	+	+
Been threatened or injured with a weapon on school property	10.4	9.4	7.4	7.2	8.5	7.8
Dating Violence						
<i>High School</i>						
Been physically forced to have sexual intercourse when they did not want to	11.7	10.2	9.0	8.1	9.0	8.8
Experienced sexual dating violence (among students who dated or went out with someone)	11.5	11.7	9.4	10.3	5.5	6.0
Experienced physical dating violence (among students who dated or went out with someone)	11.6	11.1	10.0	10.1	11.1	9.9

SOURCE: Maryland Department of Health Dataset Query System, 2017b.

NOTES: Data derived from the YRBS/YTS. + Indicates data unavailable.

Public Safety

According to correspondence from the County Department of Corrections (DOC), in 2018 the DOC processed 9,781 intakes, with an average daily jail census of 885 inmates. The median age of inmates was 25 years old; 95 percent were male; 83 percent Black, 7 percent were White, 10 percent were other races, and 10 percent identified as Hispanic. Nearly one-third of inmates (29 percent) had some level of mental illness. Most inmates (90 percent) had a history of substance abuse. Of those intakes with mental illness, 80 percent of inmates also had a substance use disorder and 85 percent were repeat offenders. A recent RAND report estimated over 60 percent of the jail mental health population in Los Angeles County jail were likely appropriate candidates for mental health diversion (Holliday et al., 2020). A similar proportion of inmates may benefit from diversion in the County's DOC system. In FY 2019, according to correspondence from the DOC, the vast majority of the Correctional Facility's population (86 percent) were awaiting trial, 11 percent were serving sentences of 18 months or less, and 3 percent were awaiting sentencing.

In 2016, the violent crime rate in Prince George's County was 423 per 100,000 (Table 5.18). Only six counties had higher violent crime rates than Prince George's county. Compared to all other counties in Maryland, Prince George's County experienced the greatest decline in the violent crime rate from 2005 to 2016 (59 percent decrease).

Table 5.18.
Violent Crime Rate per 100,000, by Jurisdiction, 2005–2016

County	2005	2016	% Change
Prince George's	1021	423	-59%
Worcester	720	334	-54%
Wicomico	963	469	-51%
Calvert	292	150	-48%
Kent	411	220	-46%
Caroline	441	259	-41%
Charles	560	357	-36%
Harford	363	234	-36%
St. Mary's	340	221	-35%
Anne Arundel	656	453	-31%
Montgomery	242	173	-28%
Baltimore	710	511	-28%
Frederick	345	249	-28%
Somerset	482	357	-26%
Talbot	325	243	-25%
Cecil	519	427	-18%
Carroll	225	188	-16%
Dorchester	546	456	-16%
Washington	371	312	-16%
Allegany	369	311	-16%
Baltimore City	1692	1566	-7%
Queen Anne's	249	233	-7%
Howard	225	214	-5%
Garrett	212	223	5%

SOURCE: County Health Rankings, 2019b.

NOTES: Data obtained from FBI's Uniform Crime Reporting.

Most jurisdictions in Prince George's County experienced declines in rates of violent crime and property crime from 2011 to 2016 (Table 5.19). The largest absolute decreases in rates of violent crime were observed in Morningside, Forest Heights, and Fairmount Heights. Both Edmonston and University Park reported increased rates of violent crime from 2011 to 2016. Only Laurel reported an increase in property crime since 2011.

Table 5.19.
Rates of Violent Crime and Property Crime per 100,000 within Jurisdictions in Prince George's County, 2011 and 2016

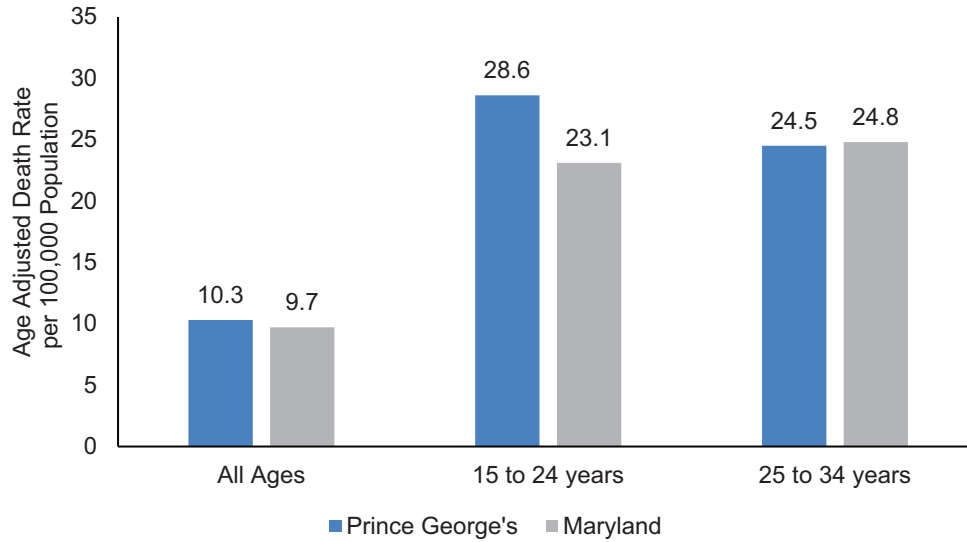
Jurisdictions within Prince George's County	Violent crime rate per 100,000			Property crime rate per 100,000		
	2011	2016	Change in rate	2011	2016	Change in rate
Berwyn Heights	190.3	151	-39.3	2,759.3	1,691.3	-1068.0
Bladensburg	1,440.20	976	-464.2	6,118.0	3,071.7	-3046.3
Bowie	168.3	98.9	-69.4	1,634.5	1,369.6	-264.9
Brentwood	552.8	155.3	-397.5	3,056.9	403.9	-2653.0
Capitol Heights	959.3	411.3	-548.0	3,220.6	822.5	-2398.1
Cheverly	433.2	351.4	-81.8	3,241.3	1,955.4	-1285.9
College Park	293.2	55.1	-238.1	4,065.0	1,043.5	-3021.5
Colmar Manor	988	742.2	-245.8	4,163.7	1,552.0	-2611.7
Cottage City	683.4	144.6	-538.8	5,391.0	1,446.1	-3944.9
District Heights	746.8	419.1	-327.7	3,632.0	789.8	-2842.2
Eagle Harbor	*	*	*	*	*	*
Edmonston	616.9	913.8	296.9	5,894.4	2,545.7	-3348.7
Fairmount Heights	928.4	63.1	-865.3	7,294.4	694.0	-6600.4
Forest Heights	890.7	192.5	-698.2	4,129.6	2,194.0	-1935.6
Glenarden	577.8	140.8	-437.0	2,988.3	1,048.5	-1939.8
Greenbelt	584	456.9	-127.1	4,229.8	2,692.7	-1537.1
Hyattsville	648.9	600	-48.9	7,470.5	5,480.6	-1989.9
Landover Hills	822.1	437.6	-384.5	3,875.5	1,860.0	-2015.5
Laurel	717.9	412.5	-305.4	3,585.4	3,826.1	240.7
Morningside	983.3	332.7	-650.6	4,818.1	1,663.5	-3154.6
Mount Rainier	907.2	537.9	-369.3	4,352.1	2,771.3	-1580.8
New Carrollton	514.3	379.4	-134.9	2,840.8	1,455.8	-1385.0
North Brentwood	*	*	*	957.9	2,394.1	1436.2
Riverdale Park	826	746	-80.0	3,773.9	1,953.1	-1820.8
Seat Pleasant	937.8	746	-191.8	5,910.6	2,237.9	-3672.7
University Park	77.8	111.6	33.8	3,304.8	1,562.5	-1742.3
Upper Marlboro	*	*	*	6,750.4	2,235.5	-4514.9

SOURCE: Maryland Governor's Office of Crime Control & Prevention, 2019.

NOTES: *Indicates unreliable data not reported.

Figure 5.3 illustrates that rates of death by homicide are higher for younger ages. Compared to the overall County rate of death by homicide of 10.3 per 100,000, the rate was 28.6 for residents aged 15 to 24 years and 24.5 for adults aged 25 to 34 years.

Figure 5.3.
Death Rate by Homicide in Prince George’s County and Maryland, by Age, Rate per 100,000, 2017



SOURCE: Centers for Disease Control and Prevention, 2019b.

NOTES: Data was accessed from CDC WONDER in 2019 and represents 2017. Crude rates presented.

Deaths Involving Law Enforcement

Since 2015, Maryland has required law enforcement agencies to submit information about all deaths involving law enforcement. Findings from a state report released in June 2019 indicate that there were 14 Maryland law enforcement agencies involved in 31 civilian deaths in 2018 (Governor’s Office of Crime Control & Prevention, 2019). The Prince George’s County Police Department and Baltimore Police Department were both involved in 5 civilian deaths each, the highest number of any agency in the state. Across the state, 14 of these deaths were classified as fatal shootings by law enforcement. Most of the individuals killed in these fatal shootings were Black (64.3 percent). The Prince George’s County Police Department was involved in five fatal civilian shootings, the highest number of any agency in the state.

Exploring the Role of the Social and Economic Environments on Two Key Populations

In the text below, we explore how the social and economic environment influences two populations: seniors and people experiencing homelessness. These populations were repeatedly mentioned during primary data collection as having unique challenges in accessing health and human services. The challenges experienced by noncitizen immigrants were also often mentioned during primary data collection, and this subgroup is described in detail in Chapter Seven.

Seniors

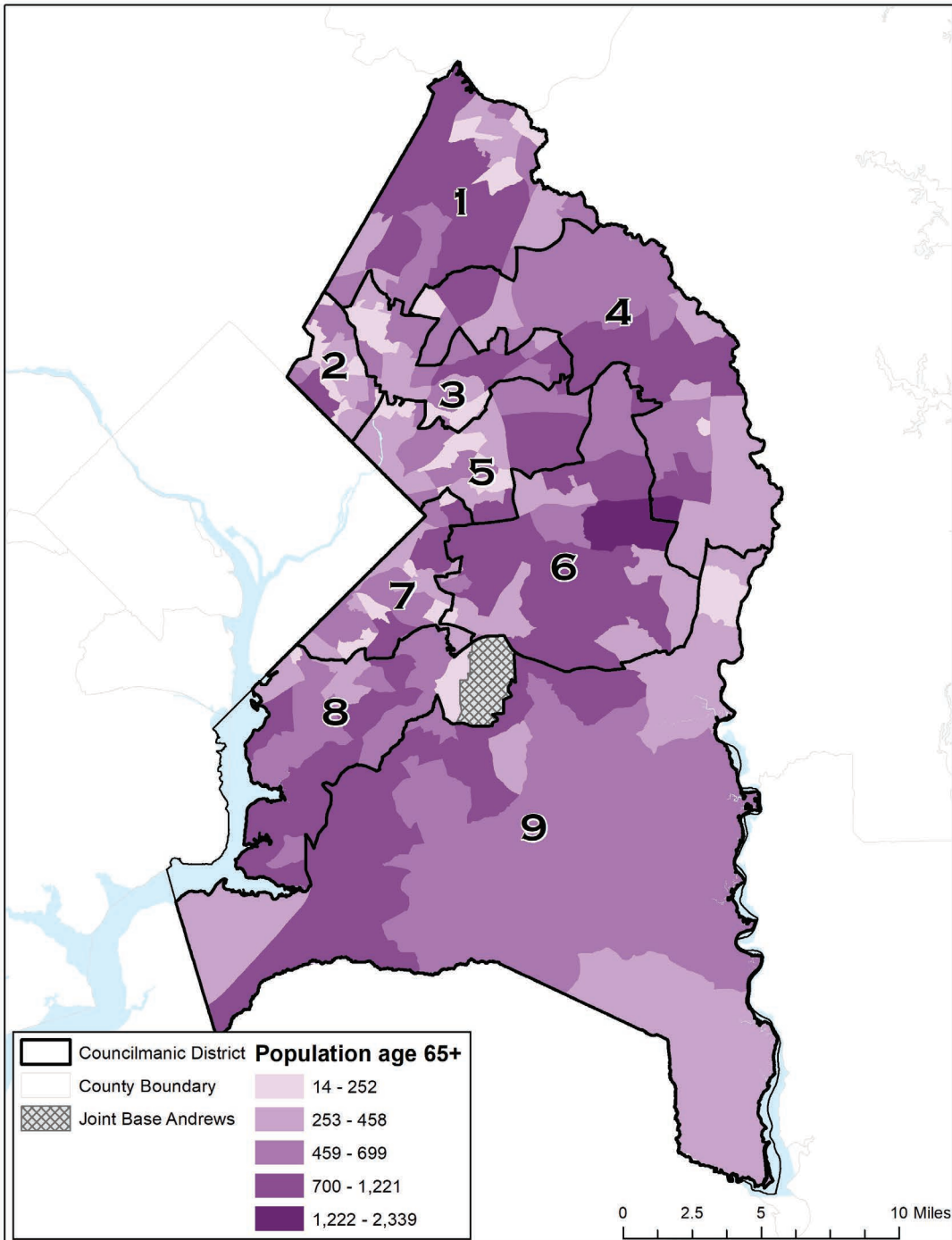
Understanding how the social and economic environment influences the senior-aged (aged 65 years and older) population is important because seniors compose a sizable and growing population, given increasing lifespans. Additionally, while seniors offer many community assets, seniors also can have some vulnerabilities. More than half of seniors have two or more chronic conditions, and many require help with activities of daily living (Ward, Schiller, & Goodman, 2014). And as Americans are living longer, many seniors are financially vulnerable as they struggle to afford housing, health care, and home care.

From 2010 to 2015, the senior-aged (aged 65 years and older) population increased by 11 percent (Prince George's County Health Department, 2019b). Such an increase in the aging population, as well as rising life expectancies, places additional strain on health care and social services systems. Communities across the United States are facing similar challenges in managing the demand for aging services while supporting the autonomy and quality of life for seniors. While Prince George's County recognizes the special needs of its older citizens, as evidenced by the resources outlined in the Senior Resource Guide, no formative assessment has evaluated the characteristics, demands, and challenges unique to the Prince George's County aging population (Prince George's Senior Provider Network, 2019). Exploring the needs of this population will aid in establishing and expanding support systems to prepare seniors and their families for long-term support to enhance quality of life. Below, we describe characteristics of the senior-aged population in Prince George's County, highlighting indicators of social and economic risk, such as English proficiency, poverty, social assistance, and health insurance.

We compare these characteristics of seniors across neighboring jurisdictions and across districts within the County. Additionally, we use data from the County to highlight some social services offered to address social and economic risk.

Figure 5.4 illustrates where seniors live by census tract. District 8 has the greatest share of seniors, with 15.4 percent of its population aged 65 years and older.

Figure 5.4.
Map Illustrating Distribution of Population Aged 65 and Older in Prince George’s County, by Census Tract, Pooled 2014–2018



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in figure were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Seniors compose 12.3 percent of the County population, which is less than in nearby counties (Table 5.20). Few County seniors lack health insurance (1.9 percent), yet this is more than the statewide rate.

Table 5.20.
Characteristics of Residents Aged 65 Years and Older, by County and State, Pooled 2014–2018

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
Population					
Aged 65 years or older	12.3	16.5	13.0	14.6	14.6
Sex					
Female	58.3	58.1	55.1	56.9	56.8
Male	41.7	41.9	44.9	43.1	43.2
Race					
White	25.2	76.8	71.1	68.1	68.6
Black	65.7	18.4	14.3	12.6	23.9
Asian	4.7	3.8	12.9	14.3	5.2
Other	2.8	0.4	0.5	3.2	1.2
Two or more races	1.6	0.6	1.2	1.8	1.1
Ethnicity					
Hispanic	4.9	1.5	2.2	8.2	3.1
Place of birth					
Foreign born	17.8	10.2	20.4	33.9	13.6
English proficiency					
Limited English– speaking household	4.2	2.7	6.2	10.2	3.6
Poverty and social assistance					
Individuals with income below poverty level	7.2	7.5	5.8	6.7	7.6
Households with at least one person age 60+ receiving SNAP	9.0	8.9	5.3	6.4	9.4
Health insurance status					
Uninsured	1.9	0.9	1.5	1.7	1.0
Private	7.0	4.1	6.4	7.8	4.8
Medicare	59.8	67.1	63.3	64.9	64.8
Medicare and Medicaid, dual-eligible	5.8	5.6	4.6	7.1	5.9
Health insurance from other non- Medicare source(s)	25.6	22.3	24.2	18.5	23.4

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract. Supplemental Nutrition Assistance Program (SNAP).

Throughout the County, seniors are more likely to be female (Table 5.21). This is most pronounced in District 7, where 60.8 percent of seniors are female. In Districts 5, 6, and 7, more than 80 percent of seniors are Black. In District 2, seniors comprise 8.7 percent of the population, of which 17.9 percent are Hispanic. Nearly 40 percent of seniors in District 2 were born outside the United States, and 15.7 percent are in limited English-speaking households. Both Districts 2 and 5 report higher than average rates of poverty and use of social assistance by seniors. In District 2, 11.0 percent of seniors live in poverty. In District 5, 11.1 percent of households with at least one person age 60 years or older are receiving SNAP benefits. Additionally, in District 7, 16.7 percent of households with at least one person age 60 years or older are receiving SNAP benefits. Poverty rates for seniors are lower in District 7 than Districts 2 and 5, suggesting that social benefits (like SNAP and public assistance income) may be helping seniors in District 7 avoid poverty. Medicare is the primary source of insurance for seniors in the County and only 1.9 percent of seniors are uninsured. In District 5, 8.7 percent of seniors are dually-enrolled in Medicare and Medicaid, a proxy for low-income status.

Table 5.21.
Characteristics of Prince George's County Residents Aged 65 Years and Older, Pooled 2014–2018

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Population										
Aged 65 years or older	12.3	11.4	8.7	9.3	13.0	12.8	12.7	12.5	15.4	14.6
Sex										
Female	58.3	59.0	56.5	58.4	58.5	59.2	59.7	60.8	56.5	56.4
Male	41.7	41.0	43.5	41.6	41.5	40.8	40.3	39.2	43.5	43.6
Race										
White	25.2	45.2	27.0	37.5	51.6	13.7	8.9	6.8	15.9	24.5
Black	65.7	35.9	55.2	50.7	39.8	81.0	87.3	89.8	74.9	67.6
Asian	4.7	13.0	4.5	5.4	5.6	1.7	1.7	0.6	6.4	4.0
Other	2.8	3.7	11.7	4.9	1.7	1.6	0.5	2.0	1.8	1.6
Two or more races	1.6	2.2	1.5	1.4	1.3	1.9	1.5	0.8	1.1	2.2
Ethnicity										
Hispanic	4.9	6.1	17.9	9.4	4.1	3.2	1.2	2.4	3.1	2.7
Place of birth										
Foreign born	17.8	31.1	39.3	32.5	18.8	16.2	10.6	5.9	11.7	7.9
English proficiency										
Limited English-speaking household	4.2	7.6	15.7	7.4	3.2	3.4	1.1	0.9	2.8	1.5
Poverty and social assistance										
Individuals with income below poverty level	7.2	8.0	11.0	6.0	5.0	9.6	6.2	9.2	5.0	6.4
Households with at least one person age 60+ receiving SNAP	9.0	7.1	12.5	9.9	4.0	11.1	7.3	16.7	8.1	6.6
Health insurance status										
Uninsured	1.9	2.9	5.0	3.7	1.9	1.9	0.4	1.3	1.4	0.6
Private	7.0	7.9	8.6	7.7	6.2	5.9	8.9	6.6	6.5	5.5
Medicare	59.8	63.9	58.4	64.5	64.1	61.4	58.6	56.2	55.0	57.5
Medicare and Medicaid, dual-eligible	5.8	5.1	9.8	8.1	4.0	8.7	4.5	7.4	3.8	3.7
Health insurance from other non-Medicare source(s)	25.6	20.1	18.2	15.9	23.7	22.2	27.7	28.6	33.3	32.6

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract. Supplemental Nutrition Assistance Program (SNAP).

Senior Services

The County offers a variety of services to seniors to help them to age with dignity. For example, the County provides backdoor trash collection for residents aged 65 years and older and with disabilities. An overview of some of these services lead by the Department of Family Services (DFS) is provided below:

- Housing and supportive services in an assisted living facility for seniors who need assistance with activities of daily living and 24-hour supervision. Also provides subsidies to low-to-moderate income individuals. In 2019, this program served 72 seniors and 62 seniors were on the waitlist.
- Gap-filling services for seniors who may be at risk of nursing home placement. These services include personal care, chore services, adult day care, medical supplies, respite care, home-delivered meals, and emergency response monitoring services. In 2019, this program served 160 seniors and 519 seniors were on the waitlist.
- Provides services to enable individuals who meet an institutional level of care or who are chronically ill or disabled remain in their own homes or assisted living facilities. Services include personal assistance, nurse monitoring, home-delivered meals, home adaptations, and medial adult daycare.
- Provides delivered meals. The number of senior citizens receiving home-delivered meals has increased over time, from 469 in 2015 to 490 in 2019 (Table 5.22). Fewer than one percent of seniors receiving meal delivery or assisted living services entered long-term care facilities. Not included in these counts is the number of seniors receiving hot, nutritious meals in congregate settings (e.g., senior centers, religious facilities, senior housing, and community centers). Seniors can receive transportation to these sites and have access to recreational and educational programs also occurring at those sites.

Table 5.22.
Metrics for Senior Services Provided by the Department of Family Services in Prince George’s County, 2015–2019

	2015	2016	2017	2018	2019*
Number of senior citizens receiving a home-delivered meal	469	455	463	470	490
% of participants in home-delivered meal program who are satisfied with the quality and quantity of home-delivered meals	90%	90%	91%	92%	92%
% of at-risk older adults entering long-term care facilities after one year of meal delivery or assisted living services	1.76%	1.43%	0.88%	0.88%	0.88%

SOURCE: Prince George’s County Department of Family Services, 2019.

NOTES: *Data from 2019 is projected.

Additionally, the Maryland-National Capital Park and Planning Commission (M-NCPPC) operates six senior activity centers and offers senior services at the new Southern Area Aquatics and Recreation Complex in Brandywine. These senior activity centers offer special events, trips, classes, health programs, information, and referrals to additional services. All seven of those locations also serve as senior nutrition sites, offering lunches. Transportation to six of these sites is available for select seniors. In addition, approximately 20 community centers host senior clubs, which meet two-to-three times per week, and offer opportunities for events, trips, classes, and health programs in a social setting.

In terms of fitness opportunities, County seniors aged 60 years and older are eligible to exercise at any M-NCPPC community center fitness room for free with a membership card. Verification of residency and age is required to obtain a membership card from any community or senior activity center. During fiscal year 2019, 19,404 membership cards were active

for seniors, which were scanned 335,231 times. In addition, during calendar year 2019, several free programs were offered to County residents, including: Get Fit Mobile Unit (4,650 participants), Fitness in the Parks (4,462 participants), and Yoga in the Parks (3,052 participants).

People Experiencing Homelessness

People experiencing homelessness are those who lack a primary nighttime residence or are living in a shelter. The experiences of people experiencing homelessness are acutely affected by County social and economic environments. According to Maryland's 2018 *Annual Report on Homelessness*, the primary driver of homelessness within the state of Maryland is a combination of low wages and a lack of affordable housing (Maryland Interagency Council on Homelessness, 2018). In 2018, the cost of living in Maryland was the 8th most expensive across all other states in the United States. (Maryland Interagency Council on Homelessness, 2018).

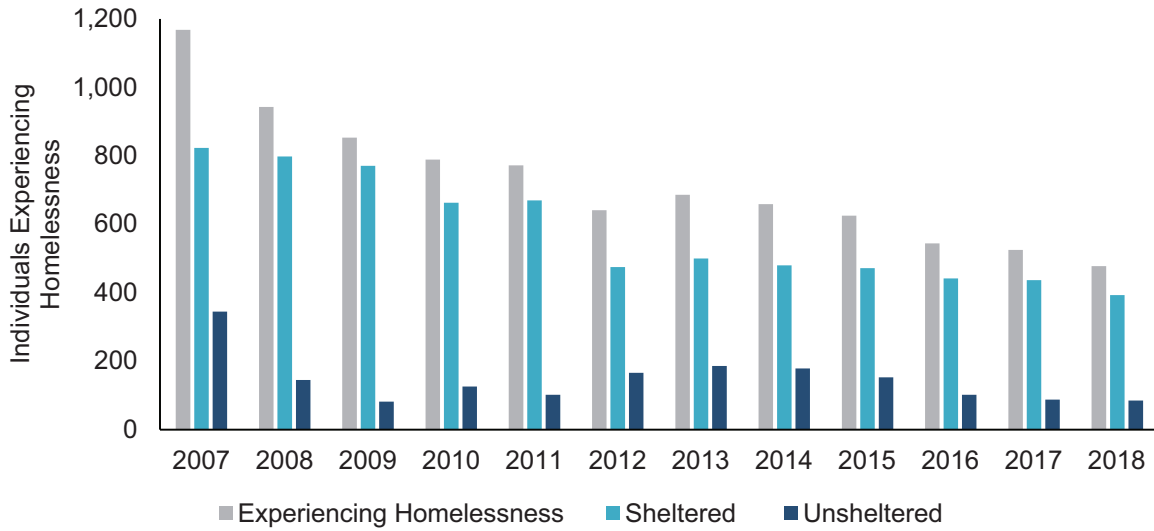
Homelessness is a strong predictor of poor physical and mental health outcomes (Oppenheimer, Nurius, & Green, 2018). Additionally, experiencing housing insecurity or homelessness is stressful for all, and particularly for children. Children experiencing homelessness are at higher risk of worse health conditions, greater emergency health care utilization, and more hospitalizations than their non-homeless counterparts (Cutuli et al., 2016).

The section below summarizes the prevalence and status of individuals and families experiencing homelessness in the County. Information about the number of people experiencing homelessness comes from point-in-time counts conducted on January 23, 2019 as part of the Continuum of Care program, which DSS leads in the County (Metropolitan Washington Council of Governments, 2019). Information about trends in counts of individuals and families experiencing homelessness comes from Maryland's 2018 *Annual Report on Homelessness* (Maryland Interagency Council on Homelessness, 2018). While these counts enable us to compare rates of people experiencing homelessness to other jurisdictions, these counts, occurring on a single night, likely underestimate the total number of people experiencing homelessness in the County. For their own monitoring purposes, DSS uses several sources of information to estimate the true number of people experiencing homelessness, including direct street outreach and drop in center data, national affordable housing studies, the Census, eviction filings, and public safety and corrections data, among others. Moreover, additional information about the characteristics of people experiencing homelessness, including health and social needs, is available from the County in the Consolidated Annual Performance and Evaluation Report (2019) and the Prince George's Fiscal Year 2020 Annual Action Plan for Housing and Community Development (2019) (Prince George's County Department of Housing and Community Development, 2019a; Prince George's County Department of Housing and Community Development, 2019b).

Individuals and Families Experiencing Homelessness

The number of individuals and families experiencing homelessness has declined in Prince George's County since 2007. In 2018, there were 478 individuals identified as experiencing homelessness in Prince George's County (Figure 5.5), meaning these individuals did not have fixed, regular, and adequate nighttime residence. More than half (57 percent) of these individuals were part of families (Figure 5.6). Few individuals experiencing homelessness in the County are unsheltered, meaning their primary nighttime location is a place not designated for or traditionally used for sleeping accommodations (e.g., streets, vehicles, or parks). In 2018, 85 individuals (18 percent of individuals experiencing homelessness) and zero families were unsheltered.

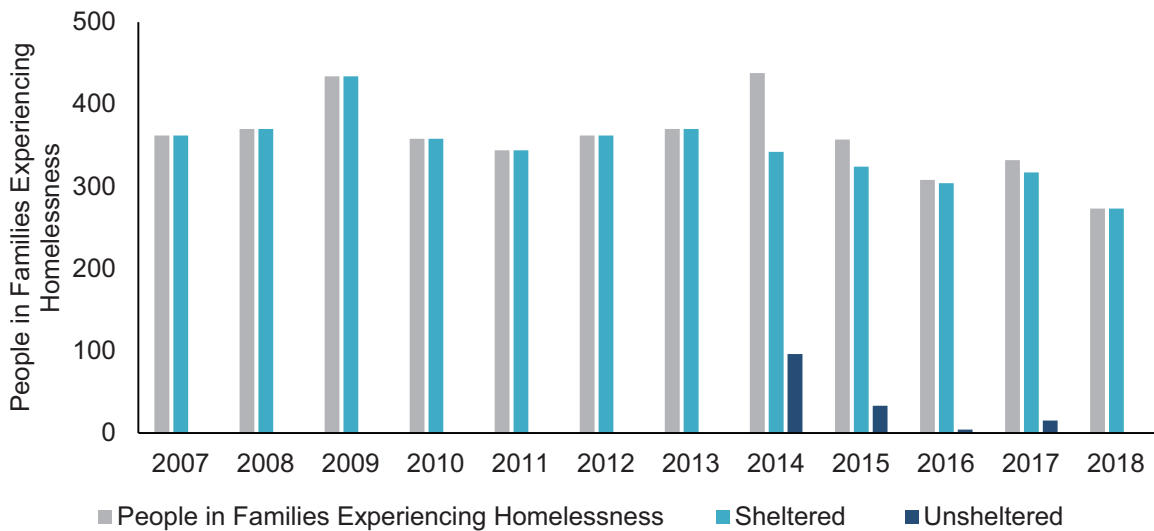
Figure 5.5.
Individuals Experiencing Homelessness in Prince George’s County, Maryland, 2007–2018



SOURCE: HUD Exchange, 2018.

NOTES: Counts come from annual Point-in-Time (PIT) counts conducted as part of the federally funded Continuum of Care program and reported in the 2018 Annual Homeless Assessment Report to Congress. PIT counts provide a count of sheltered and unsheltered persons experiencing homelessness on a single night during the last ten days in January.

Figure 5.6.
Families Experiencing Homelessness in Prince George’s County, Maryland, 2007–2018



SOURCE: HUD Exchange, 2018.

NOTES: Counts come from annual PIT counts and reported in the 2018 Annual Homeless Assessment Report to Congress.

Recent information about the population experiencing homelessness in Prince George’s County and surrounding communities comes from the 2019 report *Homelessness in Metropolitan Washington*. As noted in that report, 447 persons experiencing homelessness were counted in Prince George’s County in 2019 (Table 5.23).

Table 5.23.
Counts of Persons Experiencing Homelessness by Jurisdiction, 2019

	Count
Arlington County, VA	215
City of Alexandria, VA	198
Fairfax County, VA	1,034
Frederick County, MD	286
Loudon County, VA	169
Montgomery County, MD	647
Prince George's County, MD	447
Prince William County, VA	277
Washington, DC	6,521
Total	9,794

SOURCE: Metropolitan Washington Council of Governments, 2019.

NOTES: Counts come from 2019 Point-in-Time counts conducted as part of the federally funded Continuum of Care program and reported in the *Homelessness in Metropolitan Washington: Results and Analysis from the Annual PIT Count of Persons Experiencing Homelessness*.

The rate of persons experiencing homelessness within Prince George's County in 2019 was 0.5 per 1,000 people (Table 5.24). The County's rate is below the region average without DC's (0.7 percent).

Table 5.24.
Share of Population Experiencing Homelessness, by Jurisdiction, 2019

	Homeless per 1,000 People
Arlington County, VA	0.9
City of Alexandria, VA	1.2
Fairfax County, VA	0.9
Frederick County, MD	1.1
Loudon County, VA	0.4
Montgomery County, MD	0.6
Prince George's County, MD	0.5
Prince William County, VA	0.5
Washington, DC	9.3
Region With DC	1.8
Region Without DC	0.7

SOURCE: Metropolitan Washington Council of Governments, 2019.

NOTES: Counts come from 2019 Point-in-Time counts conducted as part of the federally-funded Continuum of Care program and reported in the *Homelessness in Metropolitan Washington: Results and Analysis from the Annual PIT Count of Persons Experiencing Homelessness*.

Table 5.24 below presents the percentage of single adults experiencing homelessness and unsheltered. Sixteen percent of Prince George's County's single adult population experiencing homelessness remains unsheltered, five percent above the region's average.

Table 5.25.
Percentage of Unsheltered Single Adults Experiencing Homelessness by Jurisdiction, 2019

	Percentage
Arlington County, VA	17
City of Alexandria, VA	5
Fairfax County, VA	9
Frederick County, MD	27
Loudon County, VA	42
Montgomery County, MD	12
Prince George's County, MD	16
Prince William County, VA	13
Washington, DC	9
Total	11

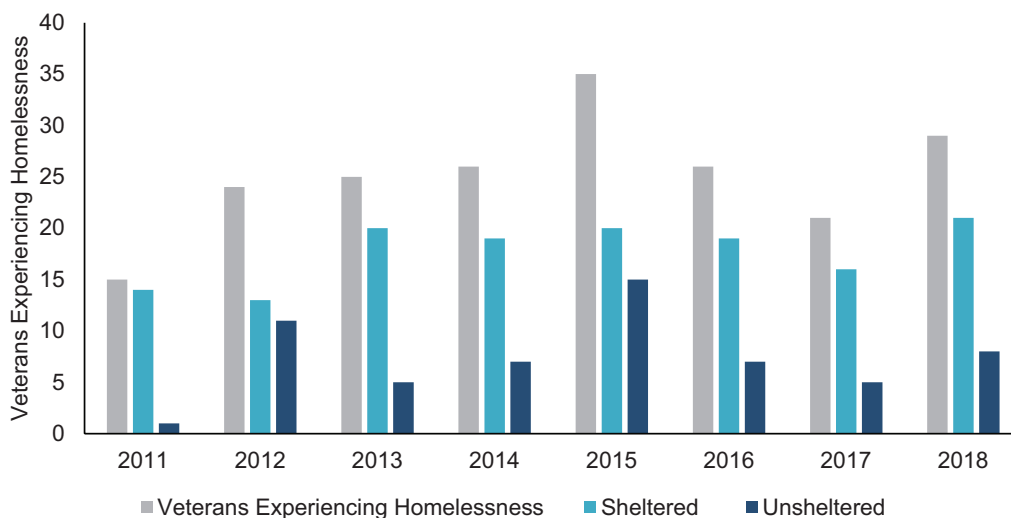
SOURCE: Metropolitan Washington Council of Governments, 2019.

NOTES: Counts come from 2019 Point-in-Time counts conducted as part of the federally-funded Continuum of Care program and reported in the *Homelessness in Metropolitan Washington: Results and Analysis from the Annual PIT Count of Persons Experiencing Homelessness*.

Veterans Experiencing Homelessness

Veterans experiencing homelessness is a national problem. In 2018, there were 37,878 veterans experiencing homelessness nationally, of which 38.5 percent were unsheltered (HUD Exchange, 2018). In Prince George's County in 2018, there were 29 veterans experiencing homelessness, of which 28 percent were unsheltered (Figure 5.7). Although better than the national average in 2018, this number is higher than what was observed in 2017 (21 veterans experiencing homelessness) and higher than the average of the preceding seven years (average of 25 veterans experiencing homelessness per year).

Figure 5.7.
Veterans Experiencing Homelessness in Prince George's County, Maryland, 2011–2018



SOURCE: HUD Exchange, 2018.

NOTES: Counts come from annual PIT counts conducted as part of the federally-funded Continuum of Care program and reported in the 2018 Annual Homeless Assessment Report to Congress. Point-in-Time counts provide a count of sheltered and unsheltered persons experiencing homelessness on a single night during the last ten days in January.

Using data from the 2019 *Homelessness in Metropolitan Washington*, the number of veterans experiencing homelessness in Prince George's County appears similar in 2018 and 2019. Compared to neighboring communities, only Washington, DC, and Fairfax County had more homeless veterans in 2019 (Table 5.26).

Table 5.26.
Counts of Veterans Experiencing Homelessness by Jurisdiction, 2019

	Count
Arlington County, VA	10
City of Alexandria, VA	7
Fairfax County, VA	42
Frederick County, MD	4
Loudon County, VA	4
Montgomery County, MD	13
Prince George's County, MD	28
Prince William County, VA	10
Washington, DC	297
Total	415

SOURCE: Metropolitan Washington Council of Governments, 2019.

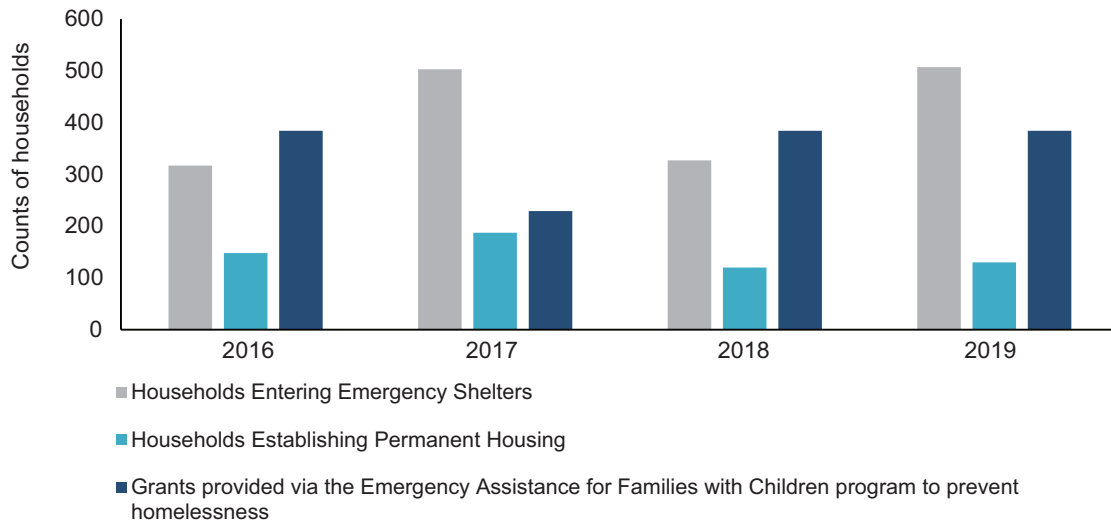
NOTES: Counts come from 2019 Point-in-Time counts conducted as part of the federally-funded Continuum of Care program and reported in the *Homelessness in Metropolitan Washington: Results and Analysis from the Annual Point-in-Time (PIT) Count of Persons Experiencing Homelessness*.

Services to Address Homelessness

The County's DSS leads the Continuum of Care program, which is a federally funded program that seeks to end homelessness. DSS works with the County's Homeless Services Partnership, the County Executive's advisory board, which is composed of more than 100 public and private partners seeking to end homelessness. Services to address homelessness in the County are described in the 2019 *Homelessness in Metropolitan Washington* report (Metropolitan Washington Council of Governments, 2019). Briefly, these services include a range of street outreach activities, shelters, and permanent supportive housing programs. Special attention is provided to the needs of veterans, unaccompanied youth, and survivors of trafficking and domestic violence. To address youth homelessness, the U.S. Department of Housing and Urban Development (HUD) Youth Homelessness Demonstration Program recently awarded Prince George's County nearly \$3.5 million to support rapid rehousing, permanent supportive housing and transitional housing. The County was one of only 23 communities nationwide to receive this grant. The newly funded *Promise Prince George's* program will leverage the federal grant funds to assist unaccompanied homeless youth ages 10 to 24 years with housing and education (Ricks, 2019).

Data from the County DSS provides information on households utilizing services provided by Prince George's County to help address homelessness. Counts illustrate point-in-time utilization for June of each year (Figure 5.8). In June 2019, 507 households entered emergency shelters, which was similar to what was observed in June 2017, but much higher than what was observed in June 2018 (327 households). The number of households establishing permanent housing increased from 120 in June 2018 to 130 in June 2019. The number of grants provided to families to prevent homelessness was 384 in June 2018 and June 2019.

Figure 5.8.
Counts of Households Utilizing Services Provided by Prince George’s County to Help Address Homelessness, 2016–2019



SOURCE: Prince George’s County Department of Social Services, 2019.

NOTES: Data provided directly from DSS to RAND and is not publicly available. Figure provides point-in-time monthly count for June of each year.

The 2019 *Homelessness in Metropolitan Washington* report provides information about housing resources available to address homeless in Prince George’s County. From 2017 to 2019, the overall number of beds available to homeless individuals increased. The number of permanent supportive housing beds increased from 242 beds in 2017 to 286 beds in 2019, driven primarily by an increase in beds for individuals (Table 5.27). The total number of rapid re-housing beds increased from 46 beds in 2017 to 179 beds in 2019. A smaller increase was observed for beds available via other permanent housing.

Table 5.27.
Housing Inventory to Address Homelessness in Prince George's County, 2017–2019

	2017*	2018	2019
Emergency Shelter Beds**			
For single women and women with children	***	***	100
For single men	***	***	24
For families (apartment based)	***	***	64
For unaccompanied youth <25 years	***	***	20
For residents fleeing domestic violence	***	***	48
For all (overnight only)	***	***	35
Permanent Supportive Housing			
Beds for individual	93	116	136
Beds for families	149	160	150
Total beds	242	242	286
Rapid Re-Housing			
Beds for individual	0	12	54
Beds for families	46	56	125
Total beds	46	68	179
Other Permanent Housing			
Beds for individual	43	9	9
Beds for families	142	188	188
Total beds	185	197	197

SOURCE: Metropolitan Washington Council of Governments, 2019.

NOTES: Permanent supportive housing (PSH) assists homeless persons with a disability to live independently. Rapid re-housing (RRH) provides short-term rental assistance to help homeless individuals move into stable, permanent housing. Other permanent housing encompasses all "other permanent housing projects dedicated to serve the population experiencing homelessness that do not otherwise meet the PSH or RRH project type descriptions" (Orange County Homeless Management Information System, 2014). *3 permanent supportive housing programs were de-funded by HUD during the FY2016 competition. **Counts of emergency shelter beds provided by the County DSS. ***Information not obtained for 2017 and 2018.

Not fully reflected in these data are housing needs for survivors of domestic violence. In 2019, as reported in personal correspondence from the County DSS, 7,604 residents called the County for services or housing assistance due to domestic violence. During this time, the specialized domestic violence shelter in the County was only able to serve 65 domestic violence survivors and the regular shelter system served 214 survivors, indicating great need for additional resources to assist with the housing needs of domestic violence survivors. Additionally, personal correspondence from the County DFS indicated that survivors of domestic violence seeking shelter often need supportive services related to financial literacy, parenting, employment, and training.

Moreover, the County tracks need for services and performance in addressing need across several metrics. A few metrics are described below:

- Among 1,308 households experiencing homelessness, the length of time the persons remained homeless was an average of 165 days (median = 75 days).

- The percentage of persons who obtained a permanent housing destination was 54 percent (among 1077 individuals exiting emergency shelters).
- The percentage of persons who returned to homelessness after having a permanent housing destination was 10 percent (with 6 percent returning to homelessness after more than one year).

These metrics illustrate the continued great need for addressing homelessness in the County.

Stakeholder Insights

In the areas of the *social and economic environment*, limited employment opportunities and lack of sufficient supportive services that promote employment were noted. In addition, affordable housing, and concern about crime were frequent concerns highlighted by stakeholders.

Stakeholders reported that many County residents face **underemployment**, which impedes their ability to obtain health care services. It was noted that while unemployment is directly linked to income and can lead to stress and negative mental and behavioral health outcomes, underemployment can also be stressful. Stakeholders noted that individuals with part-time employment may lack health insurance and the flexibility to take time off from work to address basic health care needs like preventive care. As one stakeholder described:

[The] working poor live paycheck to paycheck. You have to decide whether you can take 4 hours off. They may have a health problem that is missed.

In addition, stakeholders articulated a need for **supportive services that promote employment**. As one stakeholder explained, childcare and adequate clothing for an interview are often overlooked as critical human service needs, yet are important for obtaining employment. The County is engaged in positive efforts around this, including actions to attract businesses to help support employment and offering training and support services to help residents obtain jobs that offer a living wage (between \$12–\$14 per hour) and benefits.

It was further noted that the County offers support services for special populations with employment needs, such as the provision of career training opportunities. The County offers targeted training for special populations such as individuals with developmental and/or intellectual disabilities, veterans, returning citizens (individuals who are reentering Prince George's County after release from incarceration), in-school youth, out-of-school youth (ages 18-24), and older adults. One example of this is Project HIRE, an apprenticeship program led by the Department of Family Services, which provides individuals with developmental and/or intellectual disabilities, aged 18 to 25 years, with paid job training via placement in a variety of agencies across the County Government. Additionally, stakeholders indicated that the County sponsors workshops to support well-being for job seekers, including workshops focused on mental health and education. Stakeholders also mentioned that training, education, and childcare are services offered to individuals receiving assistance via the Temporary Assistance for Needy Families program. Stakeholders, however, noted that many residents are unaware of these programs. Per one stakeholder, there are only 30,000 residents that participate in work training activities in the county, however the individual noted there could be a potential to reach as many as 120,000 people. Another stakeholder shared their perspective that work training programs tend to be targeted towards adults or more skilled workers, leaving many youths less qualified. Other stakeholders, however, explained that such programs do not provide as many opportunities for seniors and those with disabilities.

Stakeholders indicated that immigrants encounter challenges to **obtaining employment**. Stakeholders shared that employment is a challenge, especially for refugees. Many immigrants have to go to other communities to find work, as options for employment are limited in the County. One stakeholder explained,

Most of the refugees I work with... A lot of them have trouble finding livable wages within the county. They need to go to other counties or Virginia for employment.

Given challenges to obtaining employment, stakeholders expressed concern that immigrant populations are at higher risk of becoming victims of human trafficking and wage theft. One stakeholder noted that the Hispanic population comprises 17 percent of Prince George's County residents yet makes up 31 percent of sex abuse cases. Stakeholders also mentioned that survivors of domestic violence also need support in obtaining training and securing employment.

Stakeholders shared that many immigrants **lack health insurance** and have to rely on emergency departments for care. This was noted as a significant issue for undocumented immigrants, who encounter barriers to health and health care due to uninsurance. Moreover, immigrants who are insured by Medicaid may have difficulty finding culturally competent and language-congruent providers. Mental health was observed as an important ongoing and unmet need among immigrants, particularly for issues in addressing prior trauma in refugee populations and, for some, the added stress associated with fear of deportation. Many stakeholders mentioned chronic "survival" stress, as well as the effects of trauma. Mental health services, however, were reported as being particularly challenging to immigrants to access. One stakeholder offered a perspective,

There is a great need for [mental health services] especially in today's environment with the threat of separation from family... Can get by with medical interpreters for primary care but need more for mental care... need rapport.

Non-native English speakers and immigrants also **underutilize County services** due to mistrust, lack of cultural responsiveness, and language barriers. Among the immigrant population, stakeholders reported mistrust of the police and the government due to fear of deportation. When immigrants do access government services, stakeholders indicated that non-English speakers often encounter staff who do not offer services in their language or who lack cultural competency training. Many stakeholders from County departments and non-governmental organizations indicated that the County is underequipped to provide services to populations in which English is not the primary language. Stakeholders noted this was an issue for both disseminating information about available County services and actually providing the services. Thus, stakeholders recommended more resources and staff to support dissemination and delivery of services to non-native English-speaking populations. One stakeholder thought,

Information meetings on resources and regulations of the county [should be provided] exclusively in Spanish. Avoid using automatic translators (ex. Google) to translate documents or information... often [are] confus[ing]

Stakeholders also noted that staff at schools often do not have extensive training on working with students who are non-native English speakers nor extensive training related to offering trauma-informed care for immigrant youth. As described by one stakeholder,

A lot of schools are not equipped to handle students and families with English as a Second Language needs. Very few schools equipped for ESL. It impacts their ability to learn and communicate, as well as limits opportunity for parents to get involved.

One County department leader explained that although there are limitations for spending on undocumented immigrant residents, there is still a great need for services in this population. It was noted that some County programs do not require advanced registration for services, and this may help to remove the fear about whether legal status would be assessed for use. However, stakeholders indicated that the current political environment has made some Spanish and other non-English speaking populations, particularly immigrants, less likely to use County services. And it was expressed that there is still a perception that many governmental services are not safe for undocumented or mixed-status immigrant families.

Stakeholders also described how **fear of crime** can affect residents' ability to engage in healthy behaviors, such as exercise. For example, among seniors, crime was cited as a deterrent for exercise. Hikes organized by the Department of Parks and Recreation allowing seniors to exercise together was noted as a positive approach that helped them overcome this fear.

Crime is also closely linked to employment. Stakeholders shared that having access to jobs could reduce the chance that individuals would engage in criminally oriented behavior. Efforts that seek to combat crime by also addressing the broader social and economic challenges of residents, such as the County's prior Transforming Neighborhoods Initiative (TNI), may help to reduce crime and improve overall social and economic drivers of health. Further, stakeholders noted that early engagement of youth in employment opportunities will divert them from criminal activity.

Housing costs and aging in place were also seen as critical for seniors. Stakeholders identified key challenges for seniors in the County related to housing, including the high cost of housing (including an observation that increases in Social Security Income benefits are outpaced by increases in monthly rent) and, due in part to this, seniors living in unsafe or substandard housing because they cannot afford repairs or home modifications. It was further noted that a large number of seniors are on the waitlist for the County's Housing Choice Voucher Program, which offers support for high cost rent. Further, there is a need for seniors, who may not qualify for low income services, to have more affordable housing throughout the County in close proximity to their families. In particular, initiatives that encourage seniors to age in place are needed. Because many seniors have limited income and competing financial needs, seniors require support to help them stay in their homes, such as real estate tax credits. Assistance to modify their homes to comfortably maintain activities of daily living can support aging in place. Stakeholders shared,

Many seniors are caught in what is called the middle-income gap. They make over the thresholds for services but not enough to pay for them on their own. And even if some people do qualify, the waiting lists for services are ridiculous. As the Baby Boom population gets older, this situation is going to get much worse. No amount of nonprofits are going to be able to fill in the gaps.

The threshold for the real estate tax credit has got to be increased above \$60,000. It is very expensive to live in PG County and there are many costs that seniors have to pay for that don't put food on the table or prescription bottles in your medicine cabinet.... The average retirement income in PG County is about \$36,000 a year which means that these intangible costs eat up a third of a senior's household income.

Summary

Social and economic factors, heavily influenced by historical and systemic inequities, are key drivers of health. Poverty, low educational attainment, unemployment or under-employment, and lack of safety can lead to poor health-related behaviors, psychological distress, and insufficient access to care. These factors compound each other. Families struggling to pay rent and buy groceries may avoid health care due to cost, which may lead to worse health outcomes and potentially higher costs in the future. On the other hand, these families may be struggling to pay for these necessities due to outstanding health care bills due to needed care. Additionally, individuals with less education may have jobs that do not provide health insurance or offer time off for doctor's appointments or sick days. Thus, all drivers of health compound to make it more (or less) challenging for some individuals to prioritize healthy choices.



Highlighting Key Unmet Needs

- Social and economic factors that can lead to poor health outcomes are more prevalent in districts that border DC than in other areas of the County.
- There is geographic clustering of factors associated with inequities in health outcomes. For example, District 2 has high percentages of poverty, uninsurance, Hispanic residents, and residents with a limited ability to speak English.
- Although public safety has improved in the County, middle school students reported concerns about violence in schools.
- Seniors in the County are particularly sensitive to the social and economic drivers of health, seniors in District 2 had the highest rates of poverty and uninsurance.
- Coordination of health and human services needs of populations experiencing homelessness presents challenges.

Although poverty in the County has declined, a higher percentage of residents remain in poverty and uninsured compared to neighboring counties. Poverty and low educational attainment are clustered in districts (2, 3, 5, 7) that border Washington, DC. Health risks are exacerbated without good access to preventive health care and this is particularly relevant for District 2, where a significant portion of the population lacks access to health insurance. Furthermore, while the number of residents who are unemployed or “working poor” has declined since 2014, the proportion is still higher than that seen in neighboring counties. Stakeholders additionally noted that County residents who face underemployment may exhibit impacts to their physical and mental health due to psychological stress and difficult trade-offs that are needed to seek out care when it competes with employment schedules or because of lack of insurance. Although the County offers services to promote employment, stakeholders noted that many residents are unaware of these programs.

Improvements were observed for school and public safety. For example, the rate of County high school students reporting sexual dating violence declined from 11.5 percent in 2013 to 5.5 percent in 2016. Additionally, violent crime declined in Prince George's County by 59 percent from 2005 to 2016. However, self-reported data from middle school students suggests safety concerns, as one in four County middle school students reported carrying a weapon to school

and two in three County middle school students reported having been in a physical fight. Furthermore, stakeholders noted that fear of crime is often a deterrent from taking part in health behaviors, such as exercise, particular for seniors in the County.

Seniors represent a substantial and growing population in the County, with the greatest share of seniors residing in District 8 (having nearly almost one-sixth of its population aged 65 years and older). Stakeholders emphasized the need for the County to help seniors remain social and to help seniors age in place, which has become increasingly difficult because 7.3 percent of County seniors live in poverty. Efforts to support social engagement need to be sensitive to transportation challenges faced by seniors and should be culturally relevant (for example, nearly 40 percent of seniors in District 2 were born outside the U.S). Although the County offers a variety of services to help seniors, stakeholders highlighted the fact that many seniors are caught in a gap, where they are over the income limits for services, but also face financial hardship and barriers to aging-in-place due to the rising costs of living in the County.

Some positive trends were observed for the County's population experiencing homelessness. The number of individuals and families experiencing homelessness in the County has declined over the past ten years. Additionally, more than 80 percent of individuals experiencing homelessness were sheltered in 2018. One concerning finding relates to the increasing number of veterans experiencing homelessness. Although the most recent absolute number of veterans experiencing homelessness was small (29 in 2018), this number is higher than what was observed in 2017 and higher than the average of the preceding seven years. Moreover, stakeholders noted that addressing the co-occurring psychological health issues, substance use disorders, and mental and behavioral health conditions that these individuals often have is challenging and that more County efforts are needed to coordinate the health and human services needs of the population.

The County has experienced some positive trends when it comes to the social and economic environment, but still faces higher rates of poor social and economic drivers that influence health than neighboring counties. These factors vary geographically within the county and cluster in some neighborhoods near the Washington, DC, border. Furthermore, some populations, including seniors and individuals experiencing homelessness, are particularly sensitive to poorer social and economic determinants of health.



Next Steps in Data Collection and Analysis

Secondary data offer some key insights in the social and economic environments. Truly understanding the role of these drivers of health in influencing health requires more granular data. For example, a key data source to understand the relationship between drivers of health and health outcomes in Prince George's County would include individual-level information to enable exploration of the relationship between employment, income, health care utilization, and health outcomes for residents with behavioral health needs. While detailed data sources exist at the national level (e.g., the Medical Expenditure Panel Survey and the National Health Interview Survey), these do not provide individual-level information. Linking individual-level data on clients across County departments (e.g., Departments of Health, Social Services, and Corrections) would facilitate these types of analyses.

6. Drivers of Health: Built and Natural Environments

Background

The built environment can be broadly defined as “the human-made space in which people live, work, and recreate on a day-to-day basis” (Roof & Oleru, 2008). The built environment encompasses many things including green space and parks, land use, urban development, walkability (i.e., characteristics that promote walking for transport and pleasure), and transportation access. A large body of literature indicates that the built environment can influence both health behavior and health status. In particular, neighborhood walkability, quality of parks and playgrounds, and active transport infrastructure have all been associated with greater physical activity in children and adults (Smith et al., 2017). There is also evidence that these features may be associated with lower obesity (Papasi et al., 2007), less cardiovascular disease risk factors (Lovasi, Grady, & Rundle, 2011), and better mental health (James, Banay, Hart, & Laden, 2015). The natural environment, including air and water, can also have direct consequences on health and well-being. Toxic contaminant exposure from air and water pollution can lead to adverse health consequences across a range of disease endpoints. The distribution of built and natural environment amenities and disamenities, from green space and urban heat islands to environmental pollution, closely follows the pattern of historical discriminatory practices, such as “redlining” (Grove et al., 2018; Hoffman, Shandas, & Pendleton, 2020; Nardone et al., 2020). Thus, the historical context for these drivers of health is critical to understanding present-day health disparities.

In this chapter, we describe the built and natural environments within the County.



Key data used in this chapter include information from RWJF’s County Health Rankings, ACS, U.S. Department of Agriculture, U.S. Environmental Protection Agency, Maryland- National Capital Park and Planning Commission, and the Maryland Department of the Environment, among other sources.

In this chapter, we cover features of the

- Built environment, including housing and neighborhood design
- Natural environment, including environmental exposures and monitoring systems

We explore how built and natural environment factors vary within the County and highlight ways that they may currently affect the health of County residents.

County Health Rankings

As part of the RWJF County Health Rankings project, counties are ranked on factors related to the physical environment (inclusive of measures of air quality, water quality, housing, and transit) (County Health Rankings, 2019a). As illustrated in Table 6.1, Prince George's County improved its rank related to the physical environment, improving from 18th in 2010 to 9th in 2019. Based on the RWJF County Health Rankings model, it appears that improvements in air quality and having better outcomes related to transit than other counties are the major drivers for this improvement. For example, 66 percent of County residents report driving to work alone, compared to the state average of 74 percent. However, it is important to note that the transit metrics within the model solely evaluate commuting patterns within the county: percentage of workforce that drives alone to work and the percentage of workers who have a long commute (>30 mins). The sub-ranking does not take into account the availability of transportation options nor any greenspace measurements which may affect the quality of pedestrian transit (County Health Rankings, 2019c).

Table 6.1.
County Health Sub-Rankings for the Physical Environment, Prince George's County 2010–2019

Year	Physical Environment Rank
2010	18
2011	23
2012	23
2013	21
2014	12
2015	13
2016	8
2017	6
2018	7
2019	9

SOURCE: County Health Rankings, 2019b.

NOTES: Possible ranking out of 24 counties in Maryland.

Structural Features of the Built Environment to Foster Healthy Communities

The spaces in which we live, including the homes we live in and the neighborhoods our homes are located within, can have a large impact on our physical and emotional health. Here, we highlight several features of housing and neighborhoods in Prince George's County and their relationship to health.

Housing

There is a well-established connection between housing and health (Sharpe et al., 2018). The existing evidence for the effects of housing on health points to four primary pathways: the instability and disruption to health that occurs from not having a home or the stability con-

ferred from having a home, the quality of conditions inside the home that confer safety and wellness, the financial burdens resulting from high-cost housing, and finally, the environmental and social conditions of the neighborhood in which the home is located (Taylor, 2018). The previous chapter describing populations experiencing homelessness within the County covered the economic stability pathway. In this chapter, we cover the other three pathways through a discussion of housing and neighborhood health effects. Of note, a key and comprehensive resource for readers interested in housing costs, challenges, and opportunities in Prince George’s County is “Housing Opportunity for All: Prince George’s County’s Comprehensive Housing Strategy” (Enterprise Community Partners Inc., 2019).

Overcrowding

Housing conditions, such as overcrowding, have been associated with impaired mental health, stress, sleep, and increased risk of medical conditions (Cutts et al., 2011). In Prince George’s County as of 2018, 5.0 percent of households were overcrowded or severely overcrowded (Table 6.2). This rate is considerably higher than rates in nearby counties and higher than the state average of 2.8 percent.

Table 6.2.
Percentage of Population in Overcrowded Housing, by County and State, Pooled 2014–2018

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Not overcrowded (<1 person per room)	96.1	98.4	98.0	96.8	97.8
Overcrowded (>1 person per room)	3.9	1.6	2.0	3.2	2.2
Severely overcrowded (>1.5 people per room)	1.1	0.3	0.6	1.0	0.6

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

When examining overcrowded households across districts in Prince George’s County, overcrowded households is a large problem in Districts 2 and 3, where 16.1 percent and 8.1 percent of households, respectively, are overcrowded or severely overcrowded (Table 6.3).

Table 6.3.
Percentage of Population in Overcrowded Housing in Prince George’s County, by District

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Not overcrowded (<1 person per room)	96.1	95.6	87.6	93.6	97.4	96.0	98.3	96.9	98.1	99.4
Overcrowded (>1 person per room)	3.9	4.4	12.4	6.4	2.6	4.0	1.7	3.1	1.9	0.6
Severely overcrowded (>1.5 people per room)	1.1	1.7	3.7	1.7	0.5	0.9	0.4	0.9	0.4	0.1

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Affordability

Families who pay more than 30 percent of their income for housing are considered cost-burdened and may find it difficult to afford necessities such as food, clothing, transportation, and medical care (U.S. Department of Housing and Urban Development, 2019). Such a burden may create barriers to accessing healthy food and nutrition as well as preventative health care and maintaining other healthy behaviors. In Prince George's County, over one-third of households are cost-burdened, and 15.9 percent of households pay more than 50 percent of monthly income toward housing costs (Table 6.4). These rates are higher than rates in nearby counties and higher than the state-wide averages.

Table 6.4.
Percentage of Household Experiencing Housing Cost Burden, by Jurisdiction, Pooled 2014–2018

	Prince George's County	Baltimore County	Howard County	Montgomery County	Maryland
% Households paying more than 30% of monthly household income towards housing costs	37.2	31.2	26.9	32.3	32.1
% Households paying more than 50% of monthly household income towards housing costs	15.9	14.1	11.6	14.3	14.2

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

When examining cost burden within districts in Prince George's County, housing costs are a large problem in Districts 2, 3, 5, and 7, where the proportion of the population that is cost-burdened exceeds the county-wide average (Table 6.5).

Table 6.5.
Percentage of Households Experiencing Housing Cost Burden in Prince George's County, by District, Pooled 2014–2018

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
% Households paying more than 30% of monthly household income towards housing costs	37.2	37.2	42.5	40.6	31.5	39.6	35.3	42.8	35.5	30.8
% Households paying more than 50% of monthly household income towards housing costs	15.9	16.3	19.1	18.9	12.7	17.6	14.6	17.9	15.2	11.5

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Neighborhood Design

Neighborhood design plays a strong role in providing a supportive environment for a healthy lifestyle. The idea is that neighborhoods with accessible affordable healthy food choices and opportunities for regular physical activity support individual health behavior change towards health promotion. It should be noted that these features of the neighborhood environment cannot guarantee individual behavior change. Complicating factors, such as those described in the overarching framework for this report and the previous chapter, including time constraints, financial resources, and competing demands, will also affect the adoption of healthy behaviors. As a result, there is increasing attention to the role of the neighborhood environment as a key lever to support public health promotion.

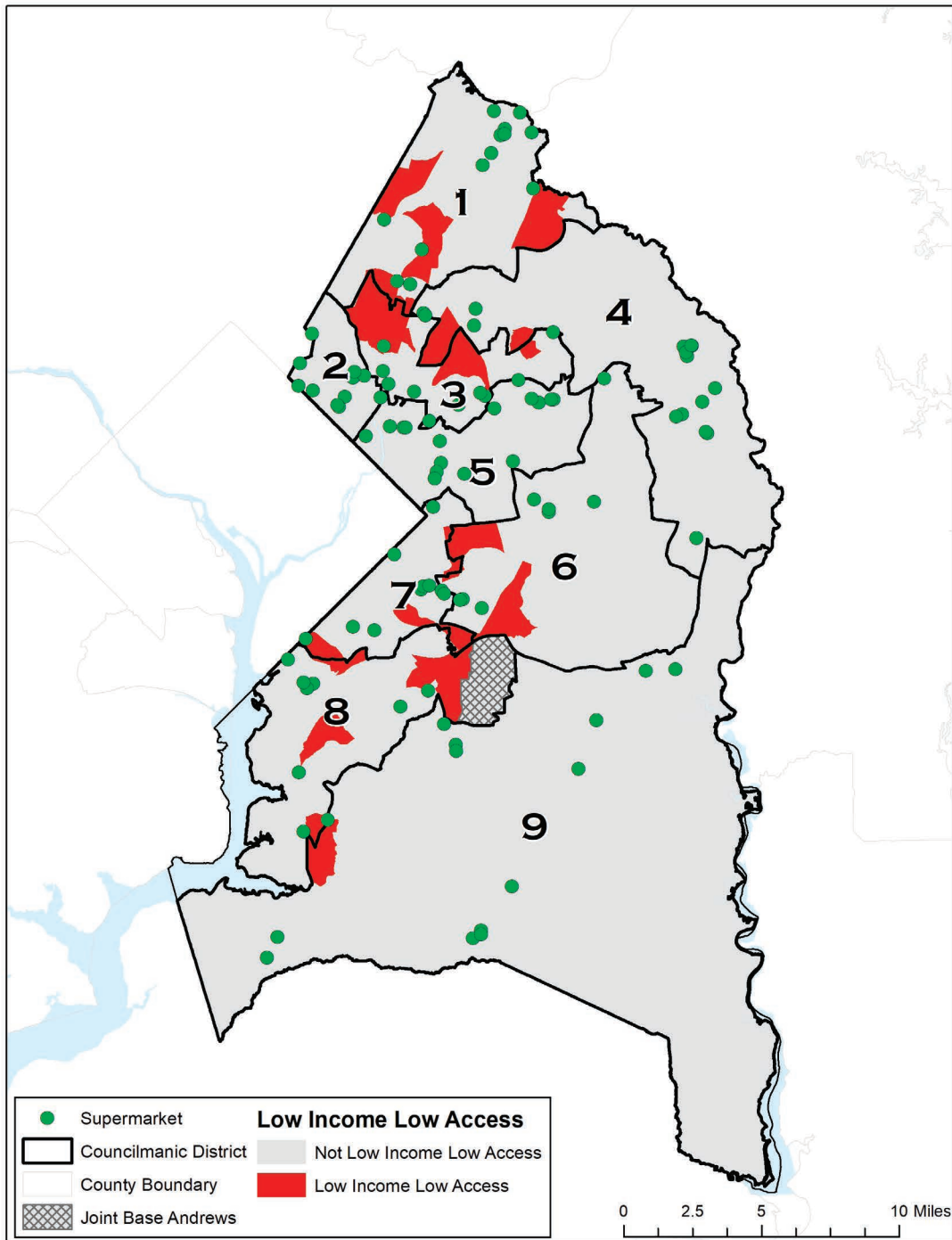
Food Environment

Limited access to supermarkets or grocery stores can make it difficult to maintain a healthy diet, and therefore, access to supermarkets may influence a wide range of health outcomes including obesity and related conditions (Gordon-Larsen, 2014). Due to perceived costs and other barriers, access to healthy food may be particularly relevant to low-income populations (Dammann & Smith, 2009). Neighborhoods that lack healthy food sources have been defined as “food deserts.” The U.S. Department of Agriculture Economic Research Service (ERS) has defined a food desert by both accessibility to sources of healthy food and neighborhood indicators of resources. One measure used by the ERS is low-income (defined as a census tract with poverty rate of 20 percent or greater, or a census tract with median family income less than or equal to 80 percent of the State-wide median family income, or a census tract in a metropolitan area that has a median family income less than or equal to 80 percent of the metropolitan area’s median family income) and low-access, or living far (one mile in urban areas and ten miles in rural areas) from a supermarket. A census tract is defined as low access if the aggregate number of people in the census tract with low access is at least 500 or the percentage of people in the census tract with low access is at least 33 percent.

Figure 6.1 below displays census tracts that are considered food deserts, as well as locations of supermarkets located within the County. Food deserts exist across most districts in Prince George’s County, but several clusters are present in Districts 1, 3, 6, 7, and 8. Here, supermarkets are defined as large-format grocery stores with all food departments present, including produce, meats, seafood, canned goods, and packaged goods. These markets are usually chain stores with annual food sales of \$2 million or more and three or more cash registers. While other types of stores may provide healthy food options, we show supermarkets here because of the diversity of food choices they offer.

There are some limitations to the USDA ERS's definition of a food desert. While it takes into account distance to supermarkets and household income, it does not necessarily account for the supply of healthy food that may be available in retail environments other than supermarkets. Further, distance to a supermarket may or may not be a barrier to healthy food access, depending on whether adequate transportation is available. Therefore, researchers and practitioners, including the Prince George's County Health Department, are investigating more comprehensive frameworks to describe the food environment, such as the one used by Baltimore City (Misiasek, Buzogany, & Freishtat, 2018). Moreover, recent evidence indicates "food swamps" (neighborhoods where fast food and junk food inundate healthy alternatives) may play a larger role than food deserts on obesity, though validity of data to accurately identify such neighborhoods, especially at small spatial scales, may pose challenges (Cooksey-Stowers, Schwartz, & Brownell, 2017; Fleischhacker, Evenson, Sharkey, Pitts, & Rodriguez, 2013). Addressing both food swamps and food deserts have been goals of policymakers in Prince George's County (Healthy Food Policy Project, 2020; Prince George's County Economic Development Corporation, 2017). Finally, recent evidence that has examined the relative contribution of the food environment and sociodemographic characteristics has found that individual factors (e.g., socioeconomic status) explained more unique variance in unhealthy dietary behaviors than environmental factors (Vaughan, Collins, Ghosh-Dastidar, Beckman, & Dubowitz, 2017). Thus, this indicates that interventions are needed at both the population- and individual-levels to improve diet in areas designated as food deserts.

Figure 6.1.
Food Deserts (2015) and Supermarkets (2017–2018) in Prince George’s County



SOURCE: U.S. Department of Agriculture, 2018; Johns Hopkins Center for a Livable Future, 2019.

Physical Activity Environment

Limited access to recreation and fitness centers may also make it difficult to maintain a healthy body weight. Although almost all residents of the County have adequate access to exercise as measured by a simple distance measure described in Chapter Three, we previously noted that this may be an overestimate because some residents face additional barriers to access, such as transportation and safety. Another measure of opportunity for physical activity is the density of recreation facilities located in the County. The proportion of recreation and fitness centers serving the population of Prince George's County (6.2 per 100,000) is far lower than the proportion in the state of Maryland (11.5 per 100,000), as shown in Table 6.6. Data are available from the U.S. Census County Business Patterns which exclude public administration and government employees, therefore public facilities may not be captured in this count.

Table 6.6.
Number of Recreation and Fitness Facilities per 100,000 Population, 2016

	Total Population	Number of Establishments	Establishments, Rate per 100,000 Population
Prince George's County	908,049	56	6.2
Maryland	6,016,447	689	11.5
United States	323,127,513	33,980	10.5

SOURCE: U.S. Census Bureau, 2016.

NOTES: Data obtained from County Business Patterns file. Data are from the U.S. Census County Business Patterns which exclude public administration and government employees, thus public facilities may not be captured in this count.

We also obtained local data to be understand access to recreation and fitness opportunities in the County. The Maryland-National Capital Park and Planning Commission (M-NCPPC), Department of Parks and Recreation, Prince George's County operates 45 community centers and one multigenerational center in the County. When these facilities are added to the numbers listed in Table 6.6, the County has about 11.3 facilities per 100,000 population. In addition to community centers, which offer recreation and fitness opportunities, the County Parks and Recreation Department has aquatic facilities, tennis bubbles, ice-skating rinks, athletic fields, athletic complexes, skate parks and other indoor amenities designed to promote wellness. To inform residents about facilities, classes, and programs offered by the Department, 50,000 guides are mailed out four times per year and a weekly email highlighting specific programs is sent to 19,227 contacts. To ensure residents can participate in these classes and programs, regardless of income, The Fee Assistance Program allows residents to participate in classes and programs at a reduced rate, ranging from reductions of 20 to 90 percent depending on need. Additionally, during 2019, M-NCPPC Department of Parks and Recreation for Prince George's County offered several free programs to the residents throughout the year including Get Fit Mobile Unit (4,650 participants), Fitness in the Parks (4,462 participants), Yoga in the Parks (3,052).

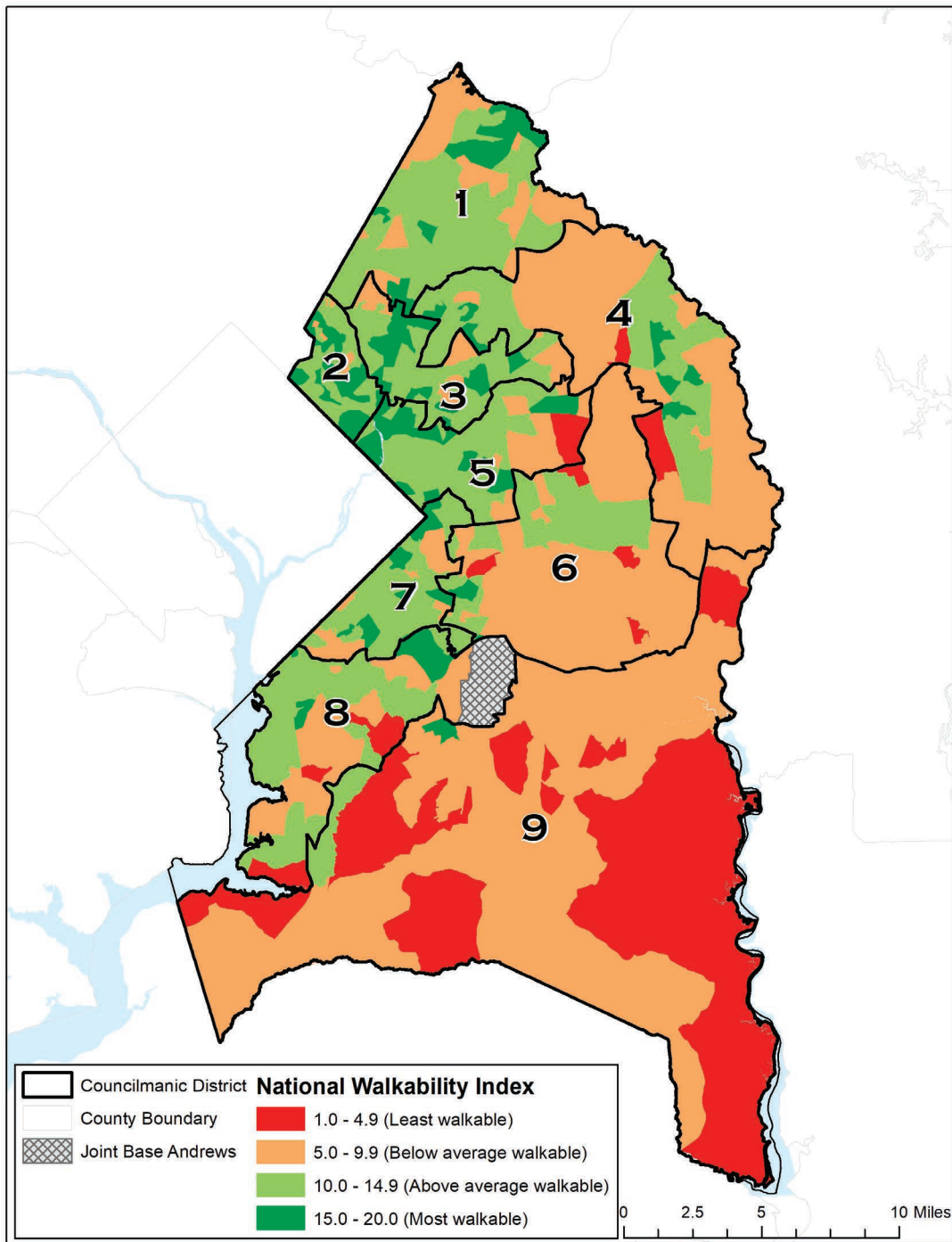
In addition to offering facilities for recreation and fitness, the M-NCPPC operates 29 licensed childcare programs in the County. These programs are licensed by and operate under the guidelines of the Maryland State Department of Education Office of Child Care and serve approximately 1,200 children. Fee assistance is offered to make these programs more affordable for qualifying residents.

Walkability

Because walking is an easy way to begin and maintain a physically active lifestyle, neighborhoods that support walking for commuting and leisure are thought to encourage physical activity and promote a healthy lifestyle (Smith et al., 2017). The term “walkability” is used to describe the presence of neighborhood features that promote walking for both transportation and pleasure. The literature has defined neighborhood walkability differently, but common metrics used include residence types, land uses mixes, and the degree of connections that exist between streets. The National Walkability Index from the United States EPA characterizes every Census 2010 block group in the U.S. based on its relative walkability. The index is based on three measures of the built environment that affect the probability of whether people walk as a mode of transportation: street intersection density, proximity to transit stops, and diversity of land uses (e.g., retail, office, industrial, and residential homes in the same area). These variables were used to rank every block group in the United States. Block groups are assigned a final score on a scale of 1 to 20, with the following categories: 1 – 4.9 (least walkable), 5 – 9.9 (below average walkable), 10 – 14.9 (above average walkable), 15 – 20 (most walkable). Figure 6.2 displays the relative walkability of block groups in Prince George’s County, according to this index.

Walkability of neighborhoods in the County exhibits wide variation, with index scores ranging from 2 to over 18. Districts bordering Washington, DC, contain a large proportion of highly walkable neighborhoods while many areas in Districts 4, 6, and 9 exhibit low walkability. It should be noted that because this measure is at the census block group level, it may not be fine-grained enough to accurately characterize some neighborhoods in small cities and towns that are highly walkable. Further, the Prince George’s County *Plan 2035* lays out a vision for growth and development in the county. The Plan envisions community health as a core component of the growth and development of the County. It also encourages curbing sprawl and revitalizing existing communities through strategic investments. The plan also identifies certain areas in Districts 4 and 9 to be considered as Priority Preservation Areas with the goal of protecting agricultural and forest resources and promote the long-term viability of the agricultural sector, rather than promoting walkability (Prince George’s County Planning Department, 2014).

Figure 6.2.
Relative Walkability of Prince George's County, by Census Tract, 2017



SOURCE: U.S. Environmental Protection Agency, 2017.

Parks

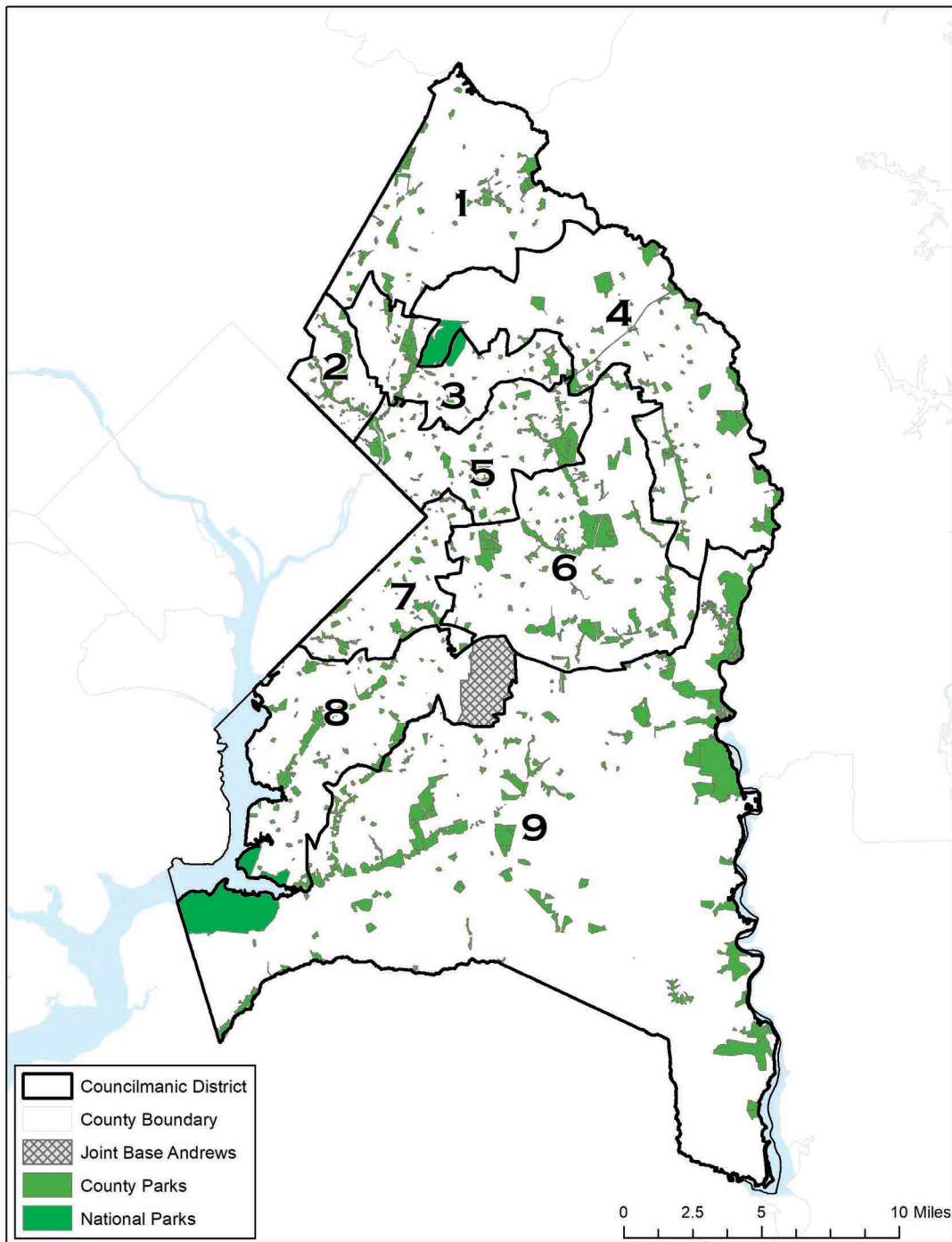
Access to parks may promote physical activity for children and adults, which in turn, can reduce the risk for obesity and chronic disease (Smith et al., 2017). In addition, parks also provide opportunities for residents to interact with nature and each other, strengthening social capital and sense of place, and improving psychological health. Table 6.7 and Figure 6.3 display the amount of park space (county and national) in each district of Prince George's County. The percent of district area covered by parks ranges from 6.1 percent (District 1) to 13.6 percent (District 2). The park acreage per 1000 residents also varies widely from 8.5 (District 2) to 123.3 (District 9). These estimates only include county and national parks and may not include other local parks. Further, park usage is not only determined by size and location but may also be influenced by other factors (e.g., quality) that are not quantifiable from geographic data sources.

Table 6.7.
Distribution of Parks in Prince George's County, by District, 2019

	County Councilmanic Districts								
	1	2	3	4	5	6	7	8	9
Percent of area covered by parks	6.1	13.6	10.2	8.6	13.4	11.2	8.5	7.5	9.4
Park acres per 1,000 population	15.6	8.5	12.2	36.0	22.4	40.2	10.0	22.2	123.3

SOURCE: Maryland-National Capital Park and Planning Commission, 2019.

Figure 6.3.
Distribution of County and National Parks in Prince George's County, 2019



SOURCE: Maryland-National Capital Park and Planning Commission, 2019.

Land Cover

Another feature of the built environment that can promote physical activity in residents is the amount of land that is covered by asphalt and pavement (impervious surfaces) versus the amount of land with green space (e.g., grass, shrubs, and vegetation) and trees. Areas with more green space and trees tend to promote more outdoor physical activity, including walking for transport and pleasure. Further, independent of other types of green space, trees have been associated with better overall health in urban areas, primarily due to lower overweight/obesity prevalence (Ulmer et al., 2016). Additionally, these same measures of neighborhood land types can contribute to heating and cooling of a neighborhood, and consequently, the comfort and health of the population. Even within a metropolitan area, substantial differences in temperature can be felt for any given time. This has mainly been attributed to the well-recognized “urban heat island” phenomenon whereby certain areas experience higher temperature compared to surrounding areas, primarily explained by the amount of impervious surface areas (e.g., asphalt, pavement) and (lack of) vegetation (Deilami, Kamruzzaman, & Liu, 2018). The most common land use types for each district in Prince George’s County are shown in Table 6.8 and Figure 6.4.

Districts 2 and 5 have a higher proportion of impervious surfaces than tree canopy. As noted earlier, these districts have many “walkable” neighborhoods, due to their street connectivity and diversity of residences and businesses. However, the lack of green space may deter some individuals from outdoor physical activity and, and therefore, promotion of physical activity could be enhanced with more green space (e.g., planting trees). During periods of extreme heat, these districts may also be more likely to experience higher temperatures than other areas in the county due to their lack of vegetation. In 2016, as reported by the CDC National Environmental Public Health Tracking Network, Prince George’s County experienced 29 extreme heat days. Extreme heat days are days in which the daily maximum temperature exceeded the 90th percentile of the range of daily maximum temperatures for Prince George’s County for summer months across all years from 1979 to 2016. In addition, more asphalt and pavement and less vegetation can contribute to a greater likelihood of flooding during extreme precipitation events. In 2016, Prince George’s County experienced 31 extreme precipitation days. Extreme precipitation days are days in which the daily precipitation exceeded the 90th percentile of the range of daily precipitation for Prince George’s County across all years from 1979 to 2016.

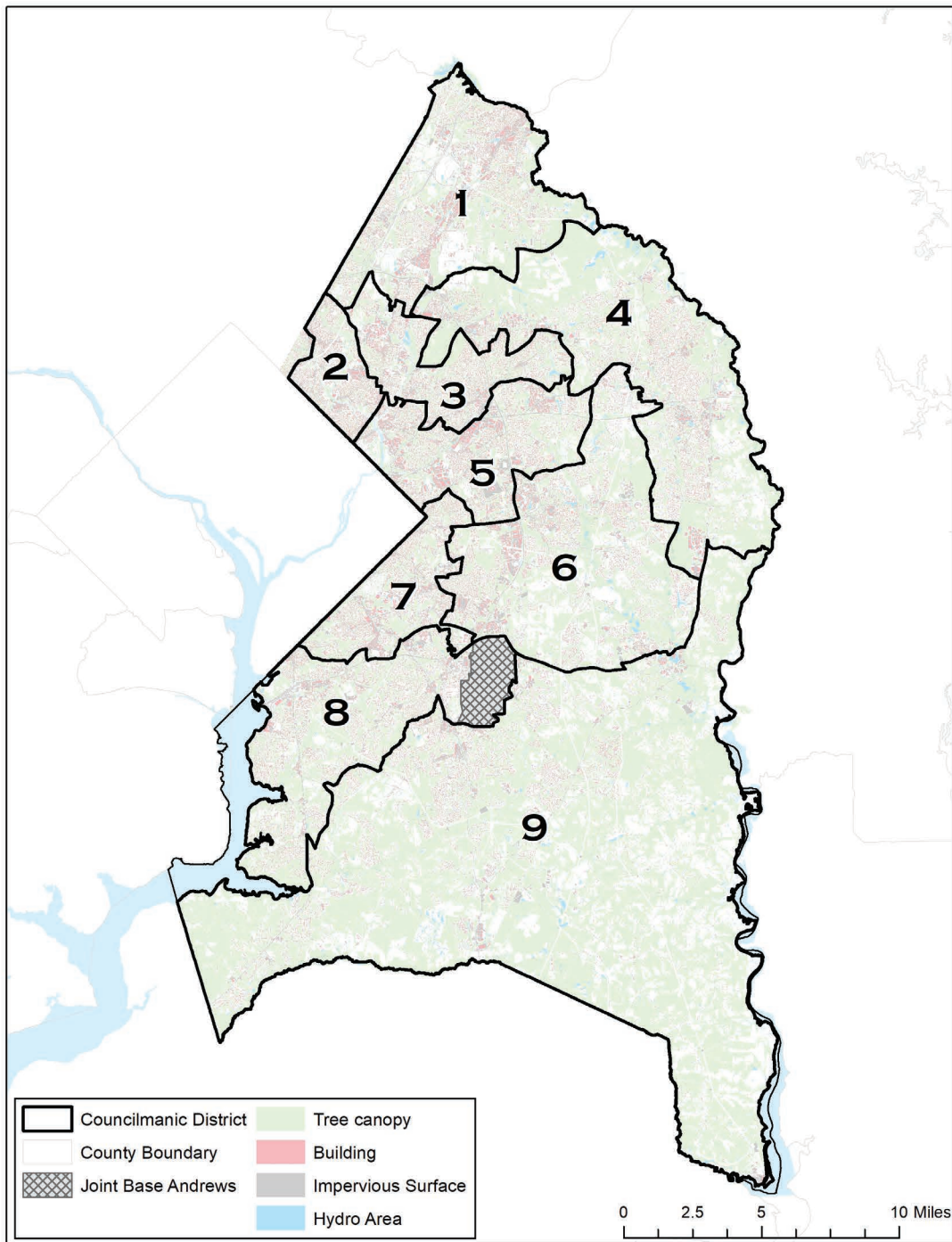
Table 6.8.
Percent Land Cover Types, District, 2017

	County Councilmanic Districts								
	1	2	3	4	5	6	7	8	9
Tree canopy	38.2	23.6	33.1	51.8	29.7	42.2	33.3	39.3	59.6
Impervious surface	23.3	38.9	32.2	15.7	35.0	18.7	32.6	23.5	6.6
Building	6.5	12.3	9.5	4.4	10.1	5.2	9.5	6.1	1.7
Hydro	1.2	1.0	1.3	1.6	1.1	1.6	0.4	0.7	1.2
Ratio of tree canopy to impervious surface	1.64	0.61	1.03	3.3	0.85	2.26	1.02	1.67	9.03

SOURCE: Maryland-National Capital Park and Planning Commission, 2019.

NOTES: Tree canopy is a measure of vegetation; Hydro is a measure of water bodies, including lakes, ponds, and streams; Impervious surfaces is a measure of human-constructed surfaces through which water cannot penetrate (e.g., asphalt and pavement) and that are below approximately 2 meters in height; Building is a measure of human-constructed objects made of impervious materials that are greater than approximately 2 meters in height.

Figure 6.4.
Land Cover Type, 2017



SOURCE: Maryland-National Capital Park and Planning Commission, 2019.

NOTES: Tree canopy is a measure of vegetation; Hydro is a measure of water bodies, including lakes, ponds, and streams; Impervious surfaces is a measure of human-constructed surfaces through which water cannot penetrate (e.g., asphalt and pavement) and that are below approximately 2 meters in height; Building is a measure of human-constructed objects made of impervious materials that are greater than approximately 2 meters in height.

Transportation

Transportation options can affect public health through various mechanisms, including by promoting active transport and greater physical activity (e.g., walking and cycling), through the production of air pollution from motor vehicles, and as a means to greater employment options and socioeconomic mobility (Litman, 2013). About 95 percent of working County residents have at least one vehicle (Table 6.9). Similar to neighboring counties, most County residents commute to work by driving alone. However, rates of commuting to work by using public transportation are higher among County residents (16.0 percent) than among residents in nearby counties. Commuting times to work are longer in Prince George’s County than in nearby counties. About 80 percent of commuters in the County spend more than 20 minutes traveling to work, compared to about 70 percent of residents in Baltimore County and Howard Counties.

Table 6.9.
Percentage of Population by Vehicle Availability and Commuting Habit, by Jurisdiction,
Pooled 2014–2018

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
Vehicle availability among working population					
One or more vehicles available	94.9	97.2	98.3	96.2	95.9
No vehicles available	5.1	2.8	1.7	3.8	4.1
Working population traveling to work by					
Driving alone	67.0	79.4	80.9	65.3	73.9
Carpool	10.8	8.6	7.4	9.8	9.0
Public transportation	15.4	4.7	3.9	15.1	8.6
Walking or bicycle	2.3	1.9	1.1	2.7	2.7
Other transportation	1.5	1.4	1.0	1.0	1.1
Working from home	3.1	4.0	5.7	6.1	4.7
% population working outside of home with commuting of					
0-19 minutes	20.0	29.9	30.9	22.7	29.0
20-29 minutes	16.2	22.4	20.2	18.2	19.0
30-44 minutes	28.0	27.8	24.3	27.5	24.3
45-59 minutes	15.6	10.8	11.6	14.9	12.2
60-89 minutes	15.5	6.3	9.3	13.4	11.1
90+ minutes	4.7	2.9	3.7	3.4	4.5

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

When comparing patterns within Prince George’s County, there are lower rates of vehicle availability among working residents in District 2 (87.8 percent) and District 7 (89.9 percent). Among the two districts with the highest rates of working residents without vehicles (Districts 2 and 7), about 24 percent of residents reported traveling to work via public transportation. Residents in Districts 6 and 9 report the longest commute times, with 41.2 percent and 46.0 percent of working residents commuting to work for longer than 45 minutes.

Table 6.10.
Percentage of Population by Vehicle Availability and Commuting Habit, by District, Pooled 2014–2018

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Vehicle availability among working population										
One or more vehicles available	94.9	97.4	87.8	93.6	97.7	94.0	97.5	89.9	95.8	98.9
No vehicles available	5.1	2.6	12.2	6.4	2.3	6.0	2.5	10.1	4.2	1.1
Working population traveling to work by										
Driving alone	67.0	74.2	52.0	60.6	73.6	66.0	70.0	61.4	67.4	75.8
Carpool	10.8	9.5	16.8	11.4	8.2	11.4	9.1	10.3	11.3	9.4
Public transportation	15.4	9.0	24.9	15.3	10.2	17.2	15.7	23.2	15.1	9.6
Walking or bicycle	2.3	2.6	3.6	7.3	1.4	1.4	0.7	1.3	1.4	1.0
Other transportation	1.5	1.7	1.2	2.7	1.2	1.5	0.8	1.9	1.5	0.8
Working from home	3.1	3.0	1.6	2.7	5.3	2.5	3.7	2.0	3.2	3.4
% population working outside of home with travel time of										
0-19 minutes	20.0	23.8	17.3	25.8	23.1	20.4	16.7	19.8	19.5	13.4
20-29 minutes	16.2	19.2	17.9	16.0	15.9	16.7	14.7	18.1	14.3	12.8
30-44 minutes	28.0	27.6	32.2	28.1	25.8	29.0	27.4	28.0	26.3	27.7
45-59 minutes	15.6	13.5	14.0	14.2	15.2	14.6	17.0	14.5	17.6	19.9
60-89 minutes	15.5	10.9	14.1	12.4	16.1	15.1	19.9	13.7	16.8	20.5
90+ minutes	4.7	5.1	4.5	3.6	4.0	4.3	4.3	5.9	5.5	5.6

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Minimizing Risk of Hazardous Contaminant Exposures

Lead

One of the most well-known environmental toxicants that exists inside the home is lead. Lead is a neurotoxicant and can cause neurodevelopmental deficits even at very low levels (Bellinger, 2008). Preventing exposure to lead in children is a priority for public health.

Exposure to Lead

As discussed previously, housing has been associated with multiple aspects of the health and development of children, including through environmental quality and exposure to toxicants (Weitzman et al., 2013). The historic use of lead in paint has created a legacy of potential toxic exposure inside the home that continues to this day. The age of a home is a marker of risk for presence of lead paint because paint typically contained high levels of lead prior to 1980. In the early 1970s the paint industry issued voluntary standards limiting lead content in paint, and in 1978 lead was banned from use in the manufacture of residential paint.

A majority of homes in Prince George’s County (57.6 percent) were built prior to 1980 (Table 6.11). This is similar to the percentage of homes built prior to 1980 in the state (54.6 percent). Districts 2, 3, and 7 have more than 30 percent of homes built prior to 1960 and, therefore, a higher risk of exposure to lead from paint than other districts (Table 6.12). Figure 6.5 displays the relative lead risk from housing based on the total number of houses and proportion of houses by year of construction. Each era of housing is adjusted with a factor that reflects proportionate risk for that era, according to the prevalence of lead-based paint hazards found in U.S. housing (Jacobs et al., 2002). Neighborhoods in District 5 bordering Washington, DC, also have a high risk for potential exposure to lead.

Table 6.11.
Percentage of Homes Built in Year, by Jurisdiction, Pooled 2014–2018

	Prince George’s County	Baltimore County	Howard County	Montgomery County	Maryland
2014 or later	1.4	0.7	2.9	1.8	1.4
2010 to 2013	2.3	1.5	5.1	2.6	2.5
2000 to 2009	10.4	8.5	14.2	10.6	11.7
1980 to 1999	28.3	28.3	45.7	33.0	29.9
1960 to 1979	34.2	26.3	25.9	30.3	25.8
1940 to 1959	18.9	26.3	4.2	16.9	16.8
1939 or earlier	4.5	8.4	2.0	4.8	12.0

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Table 6.12.
Percentage of Homes Built in Year in Prince George’s County, by District, Pooled 2014–2018

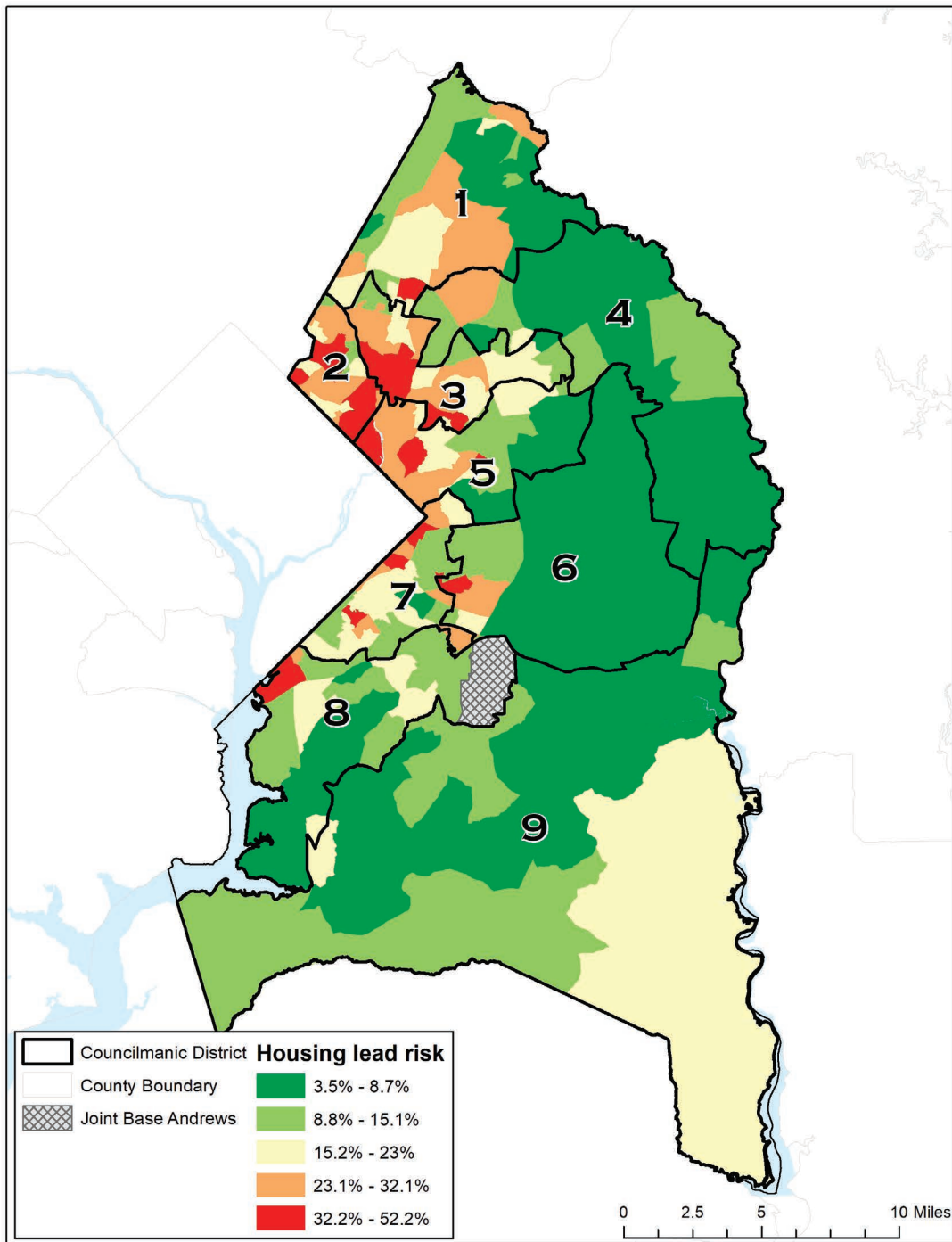
	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
2014 or later	1.4	1.8	1.0	0.6	1.6	1.2	2.7	0.6	1.6	1.5
2010 to 2013	2.3	2.7	1.6	2.1	1.1	2.2	3.8	1.3	1.5	4.1
2000 to 2009	10.4	10.9	3.8	3.8	8.5	11.6	18.4	5.1	9.9	19.3
1980 to 1999	28.3	30.3	12.9	16.3	39.9	26.0	40.7	21.3	25.9	36.3
1960 to 1979	34.2	35.6	30.3	39.1	39.0	30.2	24.2	39.4	42.1	28.1
1940 to 1959	18.9	15.0	39.7	29.8	6.9	22.5	9.0	26.9	17.6	8.2
1939 or earlier	4.5	3.7	10.7	8.3	3.1	6.3	1.2	5.4	1.4	2.5

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

The Maryland Department of the Environment reports that lead-based paint is the most frequently identified hazard for childhood lead exposure and that the majority of children in Maryland identified with an elevated blood lead level were residing in pre-1950 housing at the time of the test (Maryland Department of the Environment, 2018c). Other sources of lead exposure may include water pipes, as well as cosmetics and spices.

Figure 6.5.
Relative Lead Risk from Housing, Prince George's County



SOURCE: U.S. Census Bureau, 2019b; Jacobs et al., 2002.

NOTES: ACS data were obtained from the American Community Survey 5-Year Summary File, 2014–2018.

Blood Lead Monitoring

The Maryland Department of the Environment, Childhood Lead Registry performs childhood blood lead surveillance for Maryland. According to the CDC, there is no threshold level for blood lead that can be considered “safe.” In March 2012, the CDC established a blood lead level of 5 µg/dL or higher as the “reference value” at which case management is recommended. Previously, the CDC used a blood lead level of 10 µg/dL or higher as the “level of concern.” In Maryland, recommendations for case management are made for children with blood lead level 5–9 µg/dL, and for children at blood lead levels ≥10 µg/dL, standard case management, home visits, and environmental inspections are instituted. In 2017, 1.1 percent of tested children in Prince George’s County had a blood lead level at 5–9 µg/dL and 0.3 percent of children had a blood lead level ≥10 µg/dL (Table 6.13). This proportion was similar to that observed in Maryland, overall. Although the proportion of children with blood lead level ≥10 µg/dL is very low, it appears to be increasing in recent years (Figure 6.6).

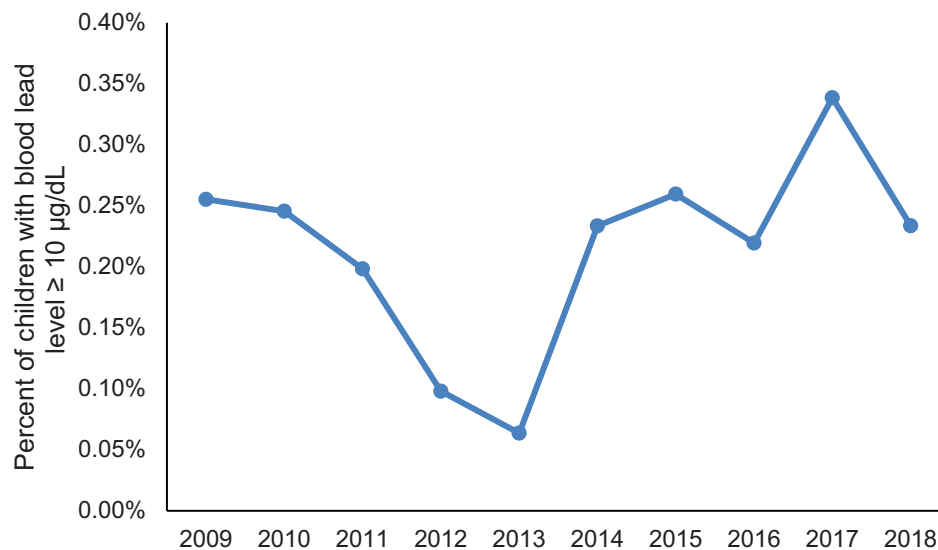
Table 6.13.
Blood Lead Testing of Children Aged 0–72 Months, 2017

	Children Tested		Blood Lead Level 5-9 µg/dL		Blood Lead Level ≥ 10 µg/dL	
	Number	Percent	Number	Percent	Number	Percent
Prince George’s County	22,754	26.1	254	1.1	77	0.3
Maryland	131,832	24.1	1,661	1.3	388	0.3

SOURCE: Maryland Department of the Environment, 2018a.

NOTES: Denominator for blood lead level is the number of children tested, not the total population.

Figure 6.6.
Percent of Children Under Age 6 With Blood Lead Level ≥ 10 µg/dL, Prince George’s County, 2009–2018



SOURCE: Maryland Department of the Environment, 2018a.

Air Quality

Poor air quality can contribute to poor health outcomes across a range of conditions. Exposure to air pollution can lead to reduced lung function, respiratory infections, exacerbations of asthma, increased risk of cardiovascular disease, poor birth outcomes, and other chronic and acute conditions. Two air pollutants that are known to lead to poor health outcomes are particulate matter less than 2.5 microns in diameter (PM_{2.5}) and ozone. Table 2.18 shows the number of days that Prince George's County experienced air quality levels that were considered unhealthy for sensitive groups, unhealthy, or very unhealthy, according to the U.S. EPA's Air Quality Index. PM_{2.5} pollution in Prince George's County has consistently declined over the last decade. While ozone pollution has also declined in the County, air quality for ozone still remains poor. This reflects a broader regional problem of the entire Washington-Baltimore-Arlington metropolitan area, which is ranked among the top 20 most polluted metropolitan areas for ozone in the country (American Lung Association, 2019).

Table 6.14.
Annual Weighted Number of High Pollution Days in Prince George's County, 2009–2017

Years	Average Weighted Number of High PM _{2.5} Days	Average Weighted Number of High Ozone Days
2009 – 2011	1.5	24
2010 – 2012	1.5	31.3
2011 – 2013	0.5	21
2012 – 2014	0	12
2013 – 2015	0	5.8
2014 – 2016	0	6.8
2015 – 2017	0	7.5

SOURCE: American Lung Association, 2019.

Water Quality

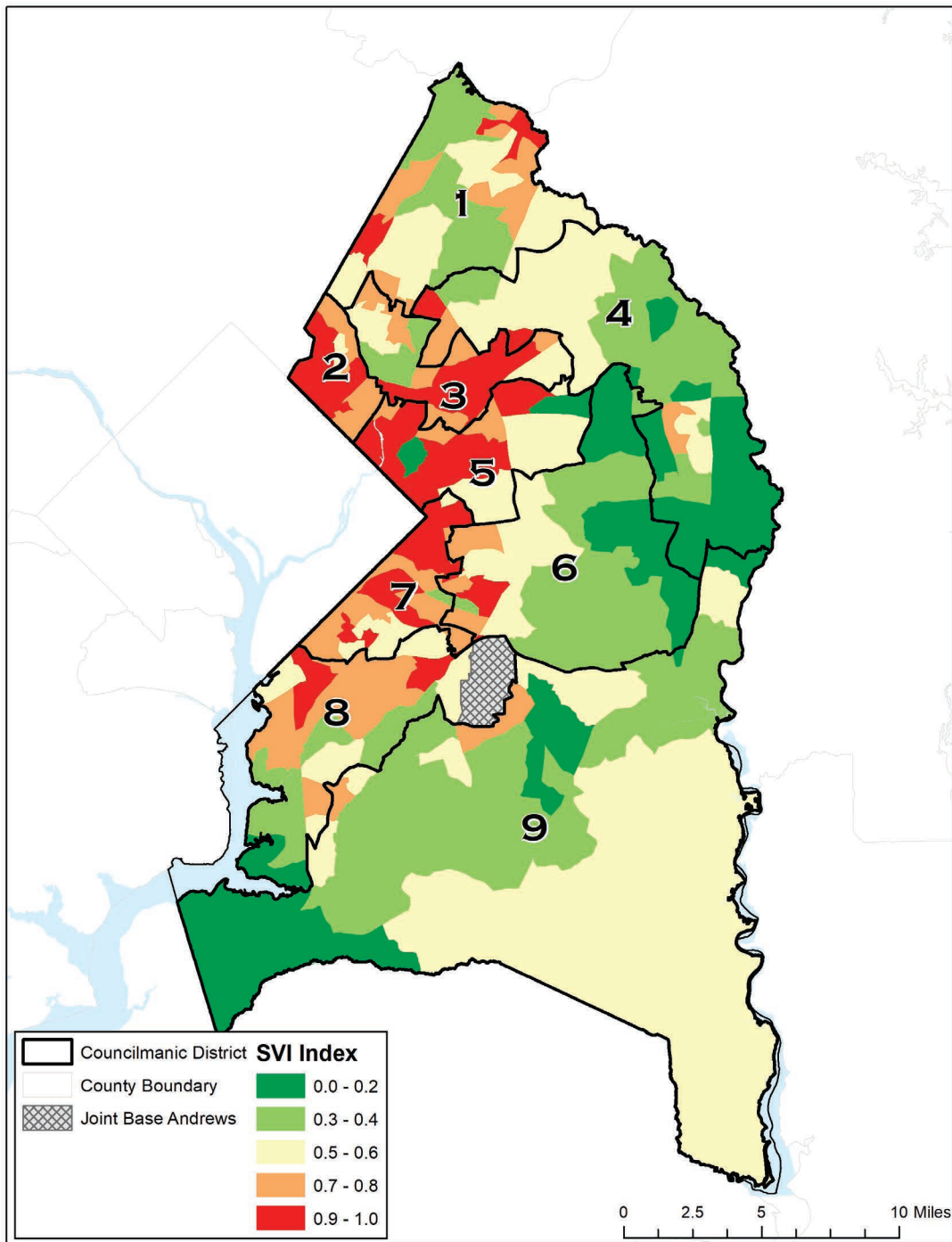
The provision of safe water is vital to protecting public health. Drinking water contaminated by chemical toxins, parasitic infections, or bacterial infection can lead to waterborne disease outbreaks, which can lead to acute gastrointestinal illness, acute respiratory illness, and neurologic illness (Benedict et al., 2017). Drinking water standards are set at the federal level by the EPA and enforced by states. When a water system fails to meet an EPA-mandated drinking water standard, a drinking water violation can be issued, although reductions in enforcement activities have led to estimates that, nationwide, 26–38 percent of health-based violations are either not reported or inaccurately reported (Allaire, Wu, & Lall, 2018). Health-based violations can be issued for exceedances of contaminants or contaminant indicators, including total coliform, turbidity, disinfection by-products, radionuclides, and organic and inorganic chemicals, such as metals.

Five public water systems in Prince George's County produced annual drinking water quality reports for 2018. These systems include the City of Bowie, Calvert Manor Corporation, Cedarville Mobile Home Park, Cheltenham Youth Facility, and Washington Suburban Sanitary Commission. No violations were reported.

Social Vulnerability Index

Because the social, economic, and physical environmental factors discussed in the present and prior chapters often cluster within neighborhoods, one way to effectively contextualize their influence on the health of residents is to represent them in an index. The Social Vulnerability Index (SVI) was created by the Agency for Toxic Substances and Disease Registry (ATSDR), within the U.S. Department of Health and Human Services, to examine the vulnerability of population groups when confronted by an acute and sudden shock, such as a disaster (Flanagan, Gregory, Hallisey, Heitgerd, & Lewis, 2011). It is a composite measure of several of the social and built environment metrics discussed in this chapter. Four domains form the basis of the SVI – socioeconomic status, household composition and disability, minority status and language, and housing and transportation. The 2016 SVI includes 15 indicators taken from the ACS. Using these data, census tracts within each state are ranked to visualize relative vulnerability. Tract rankings are based on percentiles and percentile ranking values range from 0 to 1, with higher values indicating greater vulnerability. Based on the SVI map in Figure 6.7, districts in Prince George’s County near Washington, DC, including Districts 2, 3, 5, 7, and 8, have a higher social vulnerability than districts further from DC. While the SVI has some useful elements, other vulnerability indices are beginning to emerge, which capture dimensions of political and civic participation, existence of community assets, and others features that matter for how vulnerability influences health outcomes. Some communities have also undertaken exercises to develop their own index containing factors that are most relevant for their residents. This approach could be investigated within Prince George’s County as part of a more rigorous effort to refine data collection and understand complicated relationships describing the social and environmental determinants of health.

Figure 6.7.
Social Vulnerability Index for Prince George's County, by Census Tract, 2016



SOURCE: Agency for Toxic Substances and Disease Registry, 2019.

Stakeholder Insights

Stakeholder discussions underscored some of the quantitative data about the social, built and natural environments. For example, we heard from stakeholders regarding access to healthy food, safe and accessible spaces for exercise, transportation barriers, and environmental exposures.

Stakeholders reported that there is a shortage of **affordable housing** in the County. Stakeholders noted that there is limited inventory of units that are included in the housing choice voucher program. It was also noted that there exists a need for more affordable housing for individuals who do not qualify for vouchers, as many may struggle to find housing priced within their income range within the community. Stakeholders described,

[There is a] need for affordable housing. Not just vouchers, but also affordable housing for people in the workforce, like nurses, firefighters.

There is a comprehensive housing shortage for Prince George's County. Fixing this requires the county engage in comprehensive housing strategies for the next 10 years.

Housing was cited as a key need for seniors, who also face a shortage of both low income housing and of affordable housing for individuals who do not qualify for low income housing voucher programs, as discussed above. Some apartment complexes offer units below the market rate for seniors, yet costs are still prohibitive.

If poor, [seniors] need some financial support to get into housing. We need more senior housing to replace old housing and new [additional] senior housing to meet needs.

In low income housing units, seniors and individuals with disabilities are often housed in the same locations. One stakeholder explained this may not be ideal for either population, since both have their own set of needs.

These groups don't want to be lumped together. [There is a] need for more independent living for people with disabilities or more assistance to keep them in their own homes.

Stakeholders also shared concerns about their **neighborhood environment**, as related to places to exercise, transportation options, and general pollution. Stakeholders noted that older areas of the county have fewer walkable paths, leading to more motor vehicle use and associated pollution and less outdoor exercise. Some of the denser areas in Prince George's County are industrial areas that have problems with environmental pollution and these tend to be the same areas with poor health indicators. One stakeholder described that a lot of the County's developments now prioritize construction of new roads which encourages movement to remote areas. However, stakeholders thought there should also be a focus on developing older neighborhoods and improving land use in these locations.

Stakeholders emphasized that **access to healthy and affordable food** is a key element in preventing illness in individuals of all ages. Access to healthy food is particularly important in chronic disease management, such as in the control of diabetes and hypertension. Stakeholders recommended that it was important for schools to educate children about healthy eating and that this education should extend to entire families so that healthy eating can be encouraged in the home environment.

Lack of healthy food options and limited food variety in the County was frequently cited as a barrier to healthy eating. Stakeholders frequently used the term “food desert” and noted that in many parts of the County there are limited options for grocery shopping and few options for individuals who wish to buy healthy fast foods. Stakeholders indicated that residents often leave the County to find grocery stores that sell healthy food. Further, the study team observed a perception that the grocery stores in the County offer lower quality food products compared to that which is offered outside the County,

One of the changes I would like to see for our intergenerational community is the markets. We need markets with fruits and vegetables. We've been trying to get just a Trader Joe's. Or even restaurants that just serve fresh food.

Where I live on Route 4, there are food deserts. I live in the West Valley community. I need to drive awhile to get groceries. I can't even drive 2 minutes to get some eggs or a carton of milk. I need to drive 11 miles to Safeway.

The services [in the county] are just not the same. Poorer quality. Even the supermarkets are different. They have different foods in them... right over the [county] line the grocery stores have organic food and all this wonderful stuff. You hop over to Howard County... It's a different experience.

Stakeholders emphasized a desire for opportunities for **outdoor exercise and other activities**. There were positive comments shared about the Department of Parks and Recreation's support of the community through various programs. It was noted that the County has many facilities for recreation and fitness, including both indoor and outdoor facilities, trails, parks and open space and that many of these facilities are inclusive for those with disabilities.

While many stakeholders noted that exercise is a key component of health promotion and community connectedness, many indicated the need for safe spaces within walking distance of residences, such as biking and hiking trails, that promote exercise and outdoor activity. Community centers and parks should be utilized both for exercise and for social engagement and bringing community members together. Residents felt that the County could have a large role in promoting physical activity by disseminating information about the availability of activities that encourage wellness, particularly those that promote family-based activities. Some noted,

Don't want to see more nail salons and cell phone stores. Fewer locations on beauty and more on physical activity.

I live in a community of over 200 single family homes and there is no single playground within a walking distance. We drive to the nearby parks, but I would prefer to walk.

Transportation was also cited as a barrier to health and well-being. Stakeholders emphasized that transportation can promote well-being as it allows individuals to maintain independence and engage in community activities. It was further noted that transportation is important given the County's large population spread out over a large land mass and that transportation resources are drastically different for residents in urban, suburban and rural areas. Stakeholders explained that although the majority of county residents are close to some form of public transportation, especially in densely populated areas, some areas are not well-linked with transportation services, like Clinton and the Southeast County. It was further

noted that access to the Metro is limited in many places in the County, as most Metro stops are located in the central part of the County. Relatedly, stakeholders mentioned that some residents may not equally benefit from the County's economic development due to transportation barriers. One stakeholder described,

Right now, we have so much development that is taking place in the county. Sometimes I feel like they're putting the horse before the cart. They built all of these churches and homes, but there is a tightness with not having resources to serve the areas...Based on all that development, we need to concentrate on fleshing out the transportation system.

Further, many residents who utilize County services need adequate public transportation to reach such services. For example, stakeholders mentioned that children, persons with disabilities, and seniors may have few alternatives to public transportation. It was suggested that mentoring or recreational activities may be hard to access for children living in more remote areas of the county. Further, stakeholders mentioned that many children in the foster care system and persons with disabilities reside in homes dispersed throughout the County and transportation barriers make it hard for them to access human services.

Stakeholders explained that seniors are particularly dependent on public transportation, such as the bus system and special transport options, in order to make health care appointments. One stakeholder shared that although, in theory, the County has accessible taxis for seniors who are disabled, many residents do not know how to use this service. Further, some seniors perceive that *MetroAccess*, a door-to-door shared ride service offered by the Washington Metropolitan Area Transit Authority, has limited service or relies on the use private contractors, which may be unreliable. Stakeholders observed that lack of transportation can make it difficult to reach health care providers, especially for senior citizens. One stakeholder shared,

A lot of the services are within 5 miles the central county. In West Laurel or Brandywine, there is no public transportation... Since they are closing the Laurel Regional Hospital down, the closest emergency room might be 15 miles away. I wouldn't want someone driving in an ambulance for 15 miles. The lack of public transportation compounded with traffic congestion is why I think we need more facilities.

Stakeholders recommended that community design could help to offset or mitigate these transportation issues. For example, if more businesses were located within walking distance in the community that could meet unique service needs, this may also reduce transportation requirements. While some stakeholders suggested a need to curtail economic growth to keep up with services, other residents expressed a desire for more commercial options located within Prince George's County. The study team observed that many people commute out of the County for goods, which translates into a loss of revenue for the County. Stakeholders explained the need for more commerce that supports the needs of its community. This not only includes businesses that offer high quality goods and services desired by residents but also those that offer competitive wages that allow residents to both work and live in the community. Some of the stakeholders shared,

I would say quality shopping. We get in the car to go outside county, and the sales tax goes elsewhere. I would like to spend the money here, but I can't find the things I need.

We are an affluent African American community, but we still get strip malls and casinos. Those jobs have low wages, which are not sustainable to live here. We keep losing out.

Summary

The built and natural environments can exhibit strong influences on the health of populations. In the United States, spatial patterning of built and natural environment features have been influenced by historical patterns of discriminatory practices, and thus, this context is important when thinking about upstream drivers of health inequities in the County. Several trends across these domains of the environment are worth noting.



Highlighting Key Unmet Needs

- Housing affordability is a primary concern of residents, which may contribute to overcrowding and have downstream health effects. District 2 has the highest rates of severely overcrowded housing and households paying more than 50 percent of monthly income towards housing costs
- An upward trend in children's elevated blood lead levels should be monitored.
- Areas with low access to healthy food exist throughout the County and transportation and other barriers may further hinder residents to maintain healthy eating behaviors.
- Stakeholders expressed concern about access to physical activity opportunities, which may reflect their knowledge of, or proximity to, parks and fitness and recreation centers.

Features of the built and natural environments either increase health risk or serve to motivate health-promoting behaviors, and thus, may contribute to any health disparities that exist across the County. Structural factors, such as housing, are important determinants of health. In particular, households in District 2 exhibit more overcrowding than elsewhere in the County and this can contribute to poor sleep quality, as well as other factors that may adversely impact health. Housing structures in Districts 2, 3, and 5 have a higher potential for exposure to lead than other districts in the County, due to the age of these structures. Although the proportion of children in the County with concerning blood lead levels is low, a notable trend is that it appears to be on the rise over the last 5–6 years. It will be important to track this trend and determine if risk for lead exposure remains primarily due to home-based sources (e.g., lead paint) or if other sources of exposure are contributing to this trend (e.g., cosmetics and spices). Housing affordability emerged as a priority issue in both primary and secondary data collection and may be particularly relevant for aging residents on fixed incomes in the County.

Residents expressed concern about access to healthy food and physical activity opportunities and quantitative data support this concern. The density of fitness and recreation centers in the County is lower than the state of Maryland, on average, and “food deserts” exist throughout the County. Mixed-use neighborhoods with dense street connections can promote active transport and serve as a means of increasing access to physical activity opportunities. The majority of highly walkable neighborhoods in the County exist in Districts 2, 3, 5, and 7. Although, it should be noted that even within these districts, there exist pockets of “food deserts” and low walkability. Further, these same neighborhood features that may promote active transport (higher street connectivity, mixed use) can result in lower green space. Indeed, Districts 2 and 5 have a lower ratio of tree canopy to impervious surfaces than other districts and

Districts 2 and 7 have a lower proportion of parks per population than other districts. Barriers to transportation (evident in both the quantitative and qualitative analysis) may also contribute to poor access to healthy foods and physical activity opportunities. Ongoing revitalization efforts in these neighborhoods and throughout the County should take a holistic approach to health-promoting neighborhood features. Strategic neighborhood design that promotes physical activity and active transport, while at the same time increasing the urban street tree canopy, can address multiple concerns.



Next Steps in Data Collection and Analysis

While the data available on the built and natural environments provide important preliminary insights, more detailed and nuanced measures are needed for a rigorous understanding of the most important drivers of health. Much of the data in this section is taken from administrative data sets (e.g., Census) which lack detail or are measured at a spatial scale that may miss important local differences. For example, air quality data from outdoor monitoring stations may fail to capture very local hot spots of pollution due to traffic and industrial operations. Similarly, reported water quality data may underestimate health concerns. In addition, distance to food and physical activity outlets, alone, may not provide the best measure of access. This type of measure can be particularly problematic for low-income populations who live in densely populated areas where there is an abundance of retail options, but other barriers to accessing healthy food exist. Individual-level data that captures the role of other barriers (e.g., transportation, safety concerns, socioeconomics, time-constraints, etc.) to health-promoting behaviors would provide a more complete assessment of how the environment affects health in the County.

7. Connecting Drivers of Health with Health Outcomes: Examples for Children and Noncitizen Immigrants

Overview

Prior chapters in this report have primarily focused on independently describing drivers of health and health outcomes among County residents. In this chapter, we seek to make more explicit connections between drivers of health and health outcomes for select subpopulations of residents in order to better illustrate the relationships between health drivers and health outcomes. While we focus on two subpopulations here, this type of exercise connecting drivers of health with health outcomes could be used for any *Health in All Policies* planning that seeks to invest in drivers of health comprehensively in order to improve health and well-being outcomes.

Below, we describe a sample of linkages between select drivers of health and health outcomes for children and for noncitizen immigrants.

- **Children** are key to the County's future. Early behaviors and access to health care services shape long-term outcomes. Many stakeholders mentioned concerns about children's mental health and access to health care services in the County.
 - *Below, we describe linkages between drivers of health and barriers to pediatric preventive care and linkages between drivers of health and obesity in children.*
- **Noncitizen immigrants** represent a sizable share of the county population; many encounter unique barriers to health care services, and encounter unique and growing challenges related to economic stability, safety, and health. In a changing County demography, this population requires focus in the coming decade.
 - *Below, we describe the housing experiences of this population and most common reasons for seeking health care in EDs and hospitals.*

Many of the data sources used in prior chapters are integrated here for these illustrations. Importantly, the analyses that follow are illustrative of only a few drivers of health for only two subgroups. These analyses are intended to spur further thinking and analyses about additional drivers of health that may influence the health and well-being of these populations, as well as to encourage thinking about other subgroups and the drivers of health that may be most salient to them.

Exploring Drivers of Health and Health Outcomes Among Children in Prince George's County

In conversations with stakeholders and in county-wide data-analysis, we repeatedly noted concerns about and indicators of barriers to **pediatric preventive care** and **obesity** in children. In this section, we explore the distribution and determinants of these critical health concerns among children younger than 18 years of age.

Population Profile

In 2018, 22.5 percent of County residents were children (Table 7.1). District 5 has the highest proportion of children (25.2 percent) and District 8 has the lowest proportion of children (20.4 percent). Similar to the overall population of the County, Black residents comprise the majority (59.7 percent) of children in the County. Black children live in all districts of the County, but represent greater than 60 percent of children in Districts 5, 6, 7, 8, and 9. Districts 1, 3, and 4 contain higher proportions of White children than other districts in the County. Hispanic children are heavily represented in District 2, making up nearly 70 percent of the under 18 population. Districts 1 and 3 also contain a higher proportion of Hispanic children than the County average. Districts 1, 2, and 3, also have high proportions of foreign-born children and a higher than average proportion of children with limited English-speaking proficiency.

Table 7.1.
Characteristics of Children in Prince George's County

	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Total	22.5	23.2	24.7	21.4	22.2	25.2	21.4	22.8	20.4	20.9
Sex										
Female	49.1	48.8	50.6	51.4	47.1	49.4	50.3	48.0	48.9	46.9
Male	50.9	51.2	49.4	48.6	52.9	50.6	49.7	52.0	51.1	53.1
Race										
White	14.7	23.8	13.4	25.1	27.8	14.8	4.1	4.7	8.4	7.8
Black	59.7	44.4	21.9	39.8	52.0	65.0	87.7	86.8	67.3	77.9
Asian	2.9	7.7	2.0	3.0	5.1	1.3	1.3	0.5	2.6	2.4
Other	17.9	18.0	59.7	27.4	7.4	14.4	3.4	5.3	16.3	6.4
Two or more races	4.8	6.1	2.9	4.7	7.7	4.5	3.5	2.7	5.4	5.5
Ethnicity										
Hispanic	27.5	32.4	69.6	45.7	18.6	27.5	5.6	9.9	22.8	10.2
Place of birth										
Foreign born	6.6	9.7	12.9	10.2	6.2	7.4	2.8	2.7	3.6	2.6
English proficiency										
Limited English speaking	2.7	3.9	9.4	3.2	1.4	1.7	0.5	1.4	1.8	0.8
Poverty and social assistance										
Individuals in households with income below poverty level	12.2	13.6	19.4	12.1	4.9	13.8	8.9	16.9	12.2	7.3
Health insurance status										
Uninsured	5.6	5.8	9.2	7.3	4.5	6.2	3.2	4.4	5.5	3.8
Private	50.5	53.3	25.0	45.6	70.9	41.1	63.8	43.7	47.9	66.1
Medicare	0.5	0.2	0.7	0.5	0.4	1.3	0.1	0.6	0.2	0.5
Medicaid	38.2	37.1	62.5	44.1	19.3	47.8	25.7	45.9	36.3	22.1
Health insurance from other source(s)	5.1	3.6	2.6	2.5	4.9	3.6	7.2	5.4	10.1	7.5

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the American Community Survey 5-Year Summary File, 2014–2018. All measures are based on children aged 0 up to and including 17 years. Data for health insurance status is in population ages 0 to 18 years old.

Health Outcome: Potentially Avoidable Health Care Utilization in Children

As described in Chapter Four of this report, there are significant disparities by race and ethnicity in ED visits for children in the County. Overall, ED visit rates are much higher for both Black and Hispanic children than they are for White children.

These patterns differ somewhat when looking at specific health conditions. As previously described, rates of ED visits for asthma were more than four times higher for Black and Hispanic children than White children. Rates of ED visits for mental and behavioral health conditions were highest among White children (1,429 per 100,000) and lower among His-

panic (1,001 per 100,000) and Black children (841 per 100,000). Rates of ED visits for non-traumatic dental care were highest for Hispanic children (325 per 100,000) followed by Black children (241 per 100,000), and White children (105 per 100,000). Districts 2, 3, 5, 7, and 8 all have a rate of pediatric ED visits higher than the overall county average. According to the Agency for Healthcare Research and Quality, measures of preventable ED visits include those for asthma, those with a principal diagnosis of dental conditions, and those with a principal diagnosis related to mental health, alcohol, or substance abuse (Agency for Healthcare Research and Quality, 2018). Because these types of visits are potentially avoidable, they may be indicative of poor health care management or inadequate access to care (Dowd et al., 2014).

Drivers of Potentially Avoidable Health Care Utilization in Children

Although the health disparities described above are likely the results of multiple factors, several drivers of health are probable pieces of the causal pie. While a more detailed analysis with individual-level data would prove useful to rigorously assess the determinants of childhood health disparities in Prince George's County, this assessment provides preliminary data on social correlates of these health disparities.

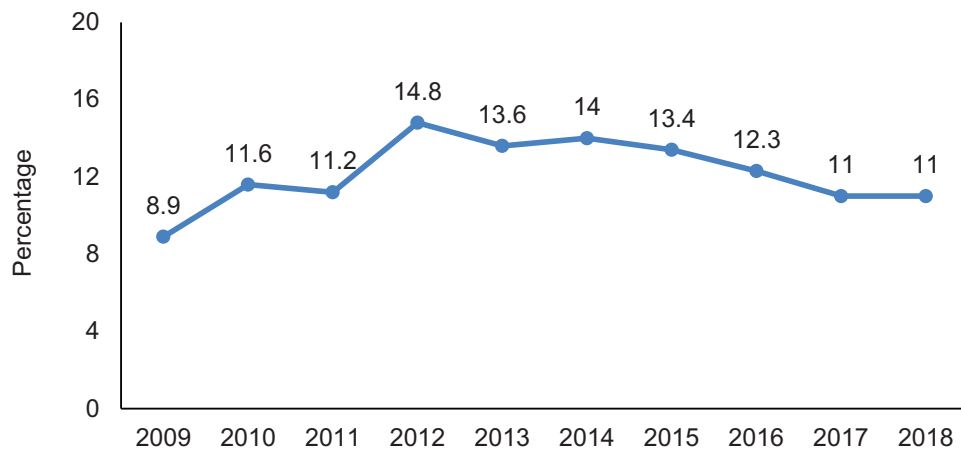
Using our conceptual framework (Figure 1.3), we delineate the key drivers for this health outcome of potentially avoidable health care use.

Social and economic environment: Health insurance and poverty

Health care costs are especially challenging for low-income populations. Even where public or subsidized insurance options exist, not all eligible populations enroll. As shown in Table 7.1, 5.6 percent of children in the County are uninsured. However, this proportion is as high as 9.2 percent in District 2. Districts 3 and 5 also have proportions of children without health insurance coverage higher than the County average. These high rates of uninsurance exist in areas with high proportions of immigrant populations and these patterns echo those seen across the United States. Prior research has shown that first-generation children were three times more likely to be uninsured than second-generation children, and five times more likely to be uninsured than children of U.S.-born residents (Hamilton & Evans). Even among non-immigrant populations, not all those who qualify for public insurance coverage will be enrolled. Lack of health insurance is a significant barrier to preventative care.

Among low-income families, particularly those living below the 100 percent of the Federal Poverty Level (FPL), costs are likely to be a barrier to seeking out preventive health care. These may include costs for care, or other costs related to transportation or missing work. Although the proportion of children in Prince George's County living below the FPL has been in steady decline since 2014 (Figure 7.1), it remains above 10 percent, overall, and varies throughout the County, with some districts (2 and 7) higher than 15 percent. As discussed above, these same districts have some of the highest rates of preventable ED visits for children.

Figure 7.1.
Percentage of Children (ages 0–17) Living in Households Below the Federal Poverty Level in Prince George’s County, 2009–2018



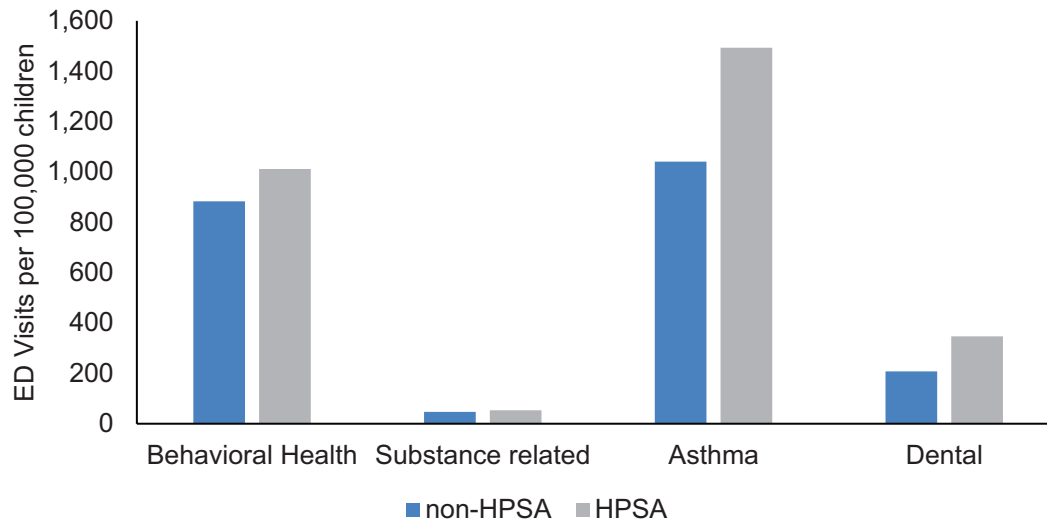
SOURCE: U.S. Census Bureau, 2019a.

NOTES: Data in figure were obtained from the American Community Survey 1-Year Summary Files, 2009–2018.

Health Care Environment: Provider Shortages

Insurance solves only one part of the health care access and health management problem. Other barriers include a shortage of health care providers, not enough providers willing to see children covered by Medicaid at the rate the government is willing to pay, and a lack of culturally competent providers (Leininger & Levy, 2015). Chapter Four of this report displayed communities in the County that are HPSAs, which have shortages of primary care providers. Shortages are most often observed in the communities neighboring Washington, DC, including in Districts 2, 3, 5, and 7. As shown in Figure 7.2, the rates of preventable ED visits for children are higher in communities with shortages of health professionals.

Figure 7.2.
Rates of ED Visits for Children per 100,000 Population in 2017, by HPSA Status



SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017; Health Resources & Services Administration, 2019.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. HPSA, health professional shortage area.

Built Environment: Transportation

Transportation and scheduling difficulties are known barriers to children receiving preventive health services (Riportella-Muller et al., 1996). Nationally, irrespective of insurance status, 4 percent of children missed a health care appointment each year because of lack of transportation, and this rose to 9 percent of children in families with incomes less than \$50,000 (Grant, Gracy, Goldsmith, Sobelson, & Johnson, 2014). In Prince George's County, approximately 5 percent of the working population over age 16 has no access to a vehicle. Districts 2 and 7 exceed that county-wide average with 12.2 percent and 10.1 percent, respectively, of the population with no vehicle available.

Prevalence of Drivers of Potentially Avoidable Health Care Utilization in Children

To better understand the distribution of factors that are associated with disparities in preventable ED visits for children, we would ideally use individual-level data for children in the County that describe reasons for missed preventable care (e.g., no primary care physician, lack of transportation), as well as reasons for health exacerbations (e.g., missed medication, asthma triggering event). Although some information is available on barriers to health care access for adults (discussed in Chapter Four), detailed individual-level data is not available for children and for a variety of risk factors.

To overcome this limitation, and to provide a preliminary assessment of barriers to preventative health care for children, we used data from the American Community Survey to better understand the prevalence of drivers for potentially avoidable health care utilization in communities with a higher percentage of children compared to communities with fewer children. To do this, we identified communities with a high percentage of children (hereafter referred to as "communities with more children") and compared them to communities with a low percentage of children (hereafter referred to as "communities with fewer children"). Com-

munities with a high percentage of children were defined as census tracts at or above the 80th percentile, i.e., having 26.4 percent or more of their population composed of children. Communities with a low percentage of children were defined as tracts below the 80th percentile, i.e., having fewer than 26.4 percent of their population composed of children.

Compared to communities with fewer children, communities with more children are more likely to have children living in households below the FPL, adults without health insurance, children without health insurance, and adults with no vehicle available (Table 7.2).

Table 7.2.
Percentage of Residents Experiencing Conditions Impacting Health Care Utilization, 2018

	Percentage of communities with low proportion of children	Percentage of communities with high proportion of children
Children in households below FPL	10.1	18.1
Population <65 without health insurance	10.0	19.9
Population <19 without health insurance	5.0	7.3
Working population 16+ with no vehicle available	4.2	9.1

SOURCE: U.S. Census Bureau, 2019b.

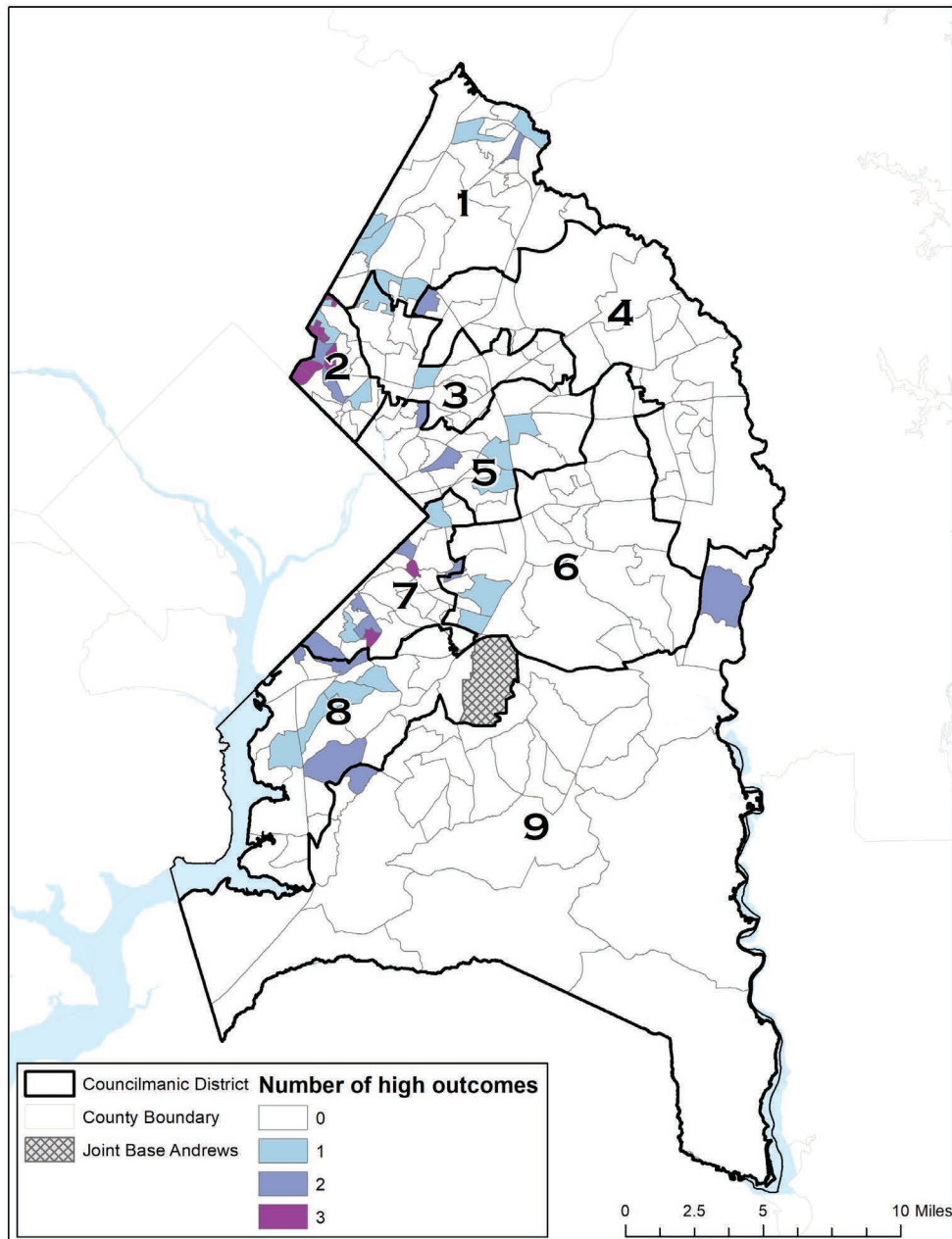
NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract.

As discussed above, many of the drivers of potentially avoidable health care utilization cluster together in neighborhoods. Figure 7.3 shows communities in the County that have a high proportion of residents with one or more of the drivers of potentially avoidable health care utilization. Drivers of potentially avoidable health care utilization include

1. Proportion of children living in households with income below the FPL
2. Proportion of population without health insurance
3. Proportion of residents 16 and older with no vehicle available.

As illustrated by the map, there are clusters of communities having more drivers of potentially avoidable health care utilization in Districts 2 and 7, areas that also have high numbers of ED visits for children. Further, there are communities throughout the County which have a high prevalence of at least two drivers of potentially avoidable health care utilization. Many of these communities are in districts that border Washington, DC.

Figure 7.3.
Communities with One or More Determinants of Potentially Avoidable Health Care Utilization



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract. Determinants of potentially avoidable health care utilization include proportion of children living in households with income below the FPL, proportion of population under age 19 without health insurance, and proportion of residents 16 and older with no vehicle available. Communities with a high percentage of children living in households with income below the FPL were defined as census tracts at or above the 80th percentile, i.e., having 20.9% or more of their population composed of children living in households with income below the FPL. Communities with a high percentage of the under 19 population without health insurance were defined as census tracts at or above the 80th percentile, i.e., having 9.2% or more of the population without health insurance. Communities with a proportion of residents 16 and older with no vehicle available were defined as census tracts at or above the 80th percentile, i.e., having 10.0% or more of the proportion of residents 16 and older with no vehicle available.

Health Outcome: Childhood Obesity and Overweight

Childhood obesity is a priority public health concern for children in the United States, and around the world. Currently, one in three children in the United States are overweight or obese (Kumar & Kelly, 2017). Children who experience obesity are more likely to have hypertension, insulin resistance and type 2 diabetes, asthma and sleep apnea, joint problems, and anxiety and depression (Cote, Harris, Panagiotopoulos, Sandor, & Devlin, 2013; Halfon, Kandyce, & Slusser, 2013; Mohanan, Tapp, McWilliams, & Dulin, 2014; Narang & Mathew, 2012). Childhood obesity is also linked to obesity in later life, which increases the risk for serious health conditions including heart disease, type 2 diabetes, and cancer (Jensen et al., 2014).

As reported in Chapter Three, the proportion of high school students in Prince George's County considered obese is higher than that in Maryland overall. Additionally, as shown in Table 7.3, this rate has climbed since 2013 from 13.7 percent to 16.4 percent in 2016. Similarly, the proportion of Prince George's County high school students who are considered overweight rose from 17 percent in 2013 to 19.3 percent in 2016. Overweight and obesity are most prevalent in Hispanic high school students, with close to one quarter of Hispanic high school students in the County considered overweight. High school students of other races also have a much higher than average rate of being overweight and non-Hispanic Black high school students have a slightly higher-than-average rate of obesity.

Table 7.3.
Percentage of High School Students Who Are Obese or Overweight, Prince George's County and Maryland, 2013–2016

	2013		2014		2016	
	PG	MD	PG	MD	PG	MD
Percent obese						
All	13.7	11.0	15.1	11.5	16.4	12.6
Black, non-Hispanic	13.2	13.5	14.8	14.4	16.8	16.3
Hispanic	16.3	12.7	15.3	13.9	17.3	14.7
White, non-Hispanic	8.2	9.1	13.8	9.2	-	9.9
Asian	13.7	NA	NA	NA	NA	NA
All other races	-	7.1	13.2	7.4	8.7	6.0
Multiple races	16.2	11.8	17.8	12.8	13.3	12.1
Percent overweight						
All	17.0	14.8	17.4	14.9	19.3	15.2
Black, non-Hispanic	16.7	17.7	15.2	16.7	17.7	17.5
Hispanic	20.4	18.7	23.8	19.5	24.7	18.1
White, non-Hispanic	13.7	12.3	11.8	12.8	-	12.9
Asian	14.2	NA	NA	NA	NA	NA
All other races	-	10.3	20.4	10.6	23.1	11.7
Multiple races	14.2	14.4	17.1	15.6	13.8	16.0

SOURCE: Maryland Department of Health Dataset Query System, 2017b.

NOTES: Data obtained from the YRBS/YTS. NA, Indicates data unavailable; - Indicates data suppressed because fewer than 100 students in this group.

Drivers of Childhood Obesity and Overweight Status

Numerous factors and drivers of health contribute to childhood obesity and overweight status. Social and economic factors, such as household income, impact the foods that families purchase. The built and natural environments also play a role, as greater proximity to parks and playgrounds may encourage physical activity. Park density in the County varies across districts and, as noted earlier in Chapter Six, distance, alone, can sometimes be a poor proxy for access. Future analysis should seek to determine the *reasons* for insufficient physical activity in youth, which may include proximity to physical activity-promoting environments as well as a host of other factors. Additionally, health literacy is positively associated with dietary quality, as individuals with higher literacy are more likely to read food labels and have healthier diets (Cha et al., 2014; Zoellner et al., 2011). Below, we present deeper divers into two drivers of obesity and overweight status: health behaviors and food access.

Health Behaviors

Behaviors that increase the risk of excess weight gain include eating high-calorie, low-nutrient foods and beverages and not getting enough physical activity. Higher proportions of high school students in Prince George's County exhibit behaviors related to obesity and overweight status than high school students in the state of Maryland, overall. The percentage of Prince George's County high school students who did not eat vegetables in the preceding week has risen from 10.3 percent in 2013 to 13.2 percent in 2016 (Table 7.4). During each year of the survey this proportion has been higher than the Maryland-wide average. The group with the highest proportion not eating vegetables in the preceding week were Hispanic students (14.9 percent) followed by Black students (13.2 percent). Compared to the average for the state of Maryland, Prince George's County high school students were more likely to not participate in at least 60 minutes of physical activity in the preceding week. This proportion rose from 23.2 percent in 2013 to 28.9 percent in 2016. The group with the highest proportion not participating in physical activity in the preceding week were Hispanic students (31.4 percent) followed by Black students (29.4 percent).

Table 7.4.
Percentage of High School Students Exhibiting Unhealthy Behaviors, Prince George’s County and the State of Maryland, 2013–2016

	2013		2014		2016	
	PG	MD	PG	MD	PG	MD
<i>% who did not eat vegetables (one or more times in 7 days before survey)</i>						
All	10.3	7.1	11.7	8.4	13.2	9.0
Black, non-Hispanic	10.7	10.4	11.6	11.9	13.2	12.9
Hispanic	9.8	9.5	13.4	10.8	14.9	11.5
White, non-Hispanic	5.2	4.7	10.3	5.5	-	5.9
Asian	3.9	NA	NA	NA	NA	NA
All other races	-	4.0	9.9	5.2	7.5	4.9
Multiple races	7.6	6.0	4.4	6.5	9.6	8.8
<i>% who did not participate in at least 60 min of physical activity on at least one day in 7 days before survey</i>						
All	23.2	18.0	25.6	19.8	28.9	21.6
Black, non-Hispanic	24.1	23.5	26.3	24.7	29.4	27.4
Hispanic	19.7	19.3	25.0	23.1	31.4	26.6
White, non-Hispanic	18.2	13.2	20.7	14.7	-	15.7
Asian	19.7	NA	NA	NA	NA	NA
All other races	-	19.7	21.9	21.6	24.5	22.5
Multiple races	20.5	16.4	23.4	18.6	28.9	20.2

SOURCE: Maryland Department of Health Dataset Query System, 2017b.

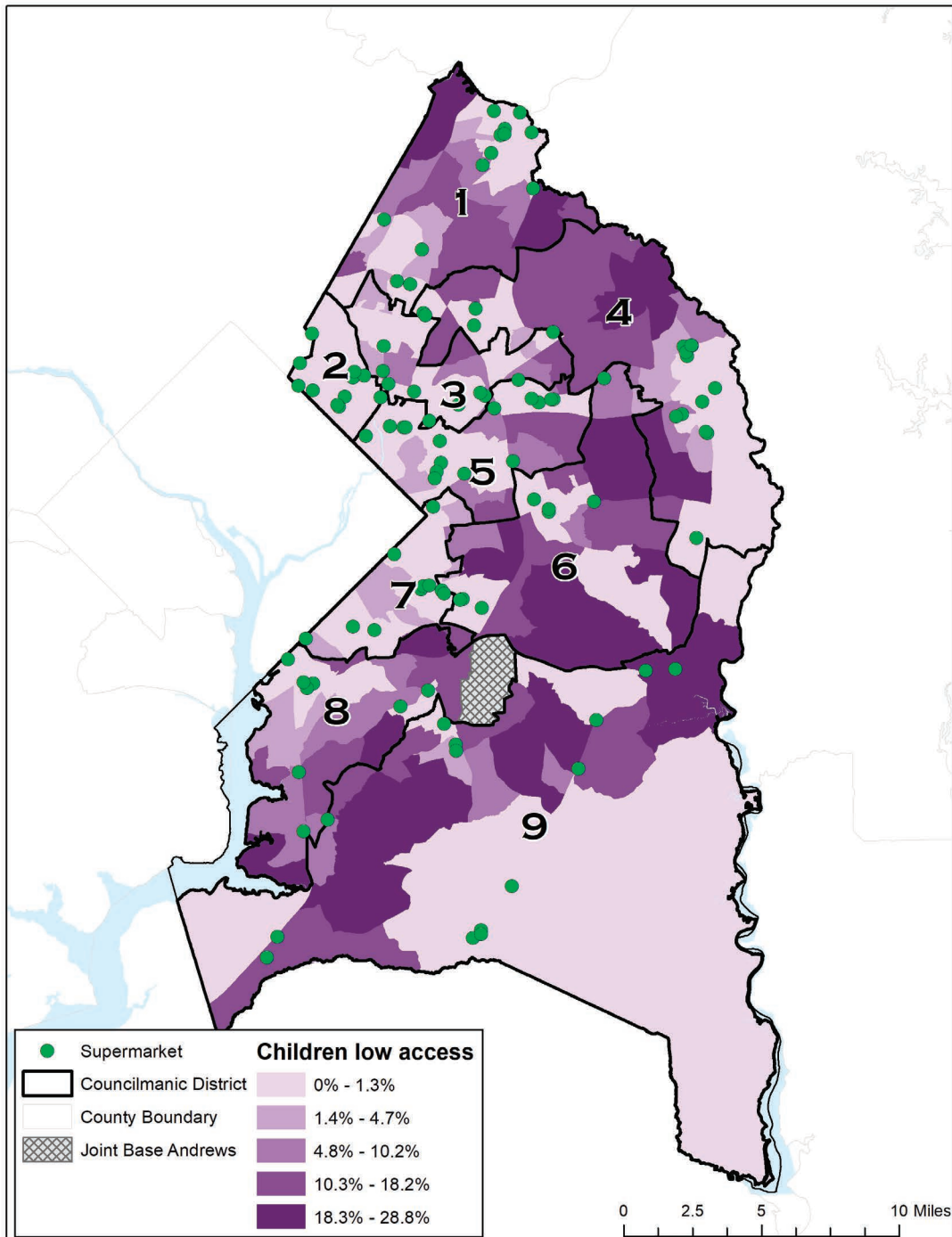
NOTES: Data obtained from the YRBS/YTS. NA, Indicates data unavailable; - Indicates data suppressed because fewer than 100 students in this group.

Built Environment: Food Access

Limited access to supermarkets or grocery stores can make it difficult to maintain a healthy diet. It is thought that access to supermarkets may provide a greater variety of healthy food choices for nearby residents, and thus, may affect health behaviors and, ultimately, the prevalence of overweight and obese residents in the neighborhood. However, when it comes to the relationship between the neighborhood food environment and childhood obesity, results from scientific studies are mixed. Some studies have demonstrated an association between the number of supermarkets in a neighborhood and lower adolescent BMI (Powell, Auld, Chaloupla, O’Malley, & Johnston, 2007), while other studies have found no evidence for an association between the food environment and childhood obesity (Alviola, Pedro, Rodolfo, Nayga, & Thomsen, 2013; Shier, An, & Sturm, 2012). This likely indicates that there is a complicated relationship between the food environment and childhood obesity, likely influenced by multiple drivers of health.

Figure 7.4 shows the percentage of each census tract population in Prince George's County who are aged 0-17 years living more than one mile (in urban areas) or more than ten miles (in rural areas) from the nearest supermarket, supercenter, or large grocery store. Urban and rural areas were defined according to the Census Bureau's urbanized area definitions, where rural areas are sparsely populated areas with fewer than 2,500 people, and urban areas are areas with more than 2,500 people. A census tract is urban if the geographic centroid of the tract is in an area with more than 2,500 people; all other tracts are rural. Large areas of Districts 1, 4, 6, and 9 have high proportions of children with low access to food. Hispanic high school students have the highest rate of overweight and obesity in the County. As noted earlier in this chapter, Hispanic children are heavily represented in Districts 2 and 3. Therefore, based on this data alone, proximity to large grocery stores (which are highly concentrated in Districts 2 and 3) does not appear to be the main driver of overweight and obesity in Hispanic adolescents, though it may be part of a complicated interrelationship that also includes additional barriers to healthy food access and behaviors due to poverty. A high proportion of Black high school students in the County are also considered obese. Given that high proportions of Black children live in Districts 4 – 9, low access to food may be an important driver of obesity in this population. Importantly, data availability on childhood overweight and obesity was limited to high school students; therefore, it is unclear how these patterns distribute in younger children. In order to provide a clearer picture of the nuanced relationships between the food environment, health behaviors, and childhood overweight and obesity in the County, individual-level data on each of these factors is needed from a sample of children of all ages.

Figure 7.4.
Proportion of Residents Age 0–17 with Low Food Access (2015) and Supermarkets (2017–2018) in Prince George’s County



SOURCE: U.S. Department of Agriculture, 2018; Johns Hopkins Center for a Livable Future, 2019.
 NOTES: Map shows percentage of tract population who are age 0–17 living more than one mile (urban areas) or more than ten miles (rural areas) from the nearest supermarket, supercenter, or large grocery store.

Exploring Drivers of Health and Health Outcomes Among Noncitizen Immigrants in Prince George's County

Research suggests that immigrants encounter more nuanced challenges beyond policy and financial barriers such as discrimination and fear of deportation (Hacker, Anies, Folb, & Zallman, 2015). Depending on their citizenship status, immigrants may encounter difficult circumstances due to language, cultural, or socioeconomic barriers. For example, noncitizen immigrants are ineligible for federally subsidized health services, which can place additional demand on government- and nonprofit-supplied health and human services resources within the County. Local advocacy and service organizations such as CASA and La Clínica Del Pueblo are active in promoting the health of foreign-born residents. In 2018, La Clínica Del Pueblo held a stakeholder forum following which several recommendations addressing immigrant health equity were developed (La Clínica Del Pueblo, 2018). Recommendations included increased cross-sector collaboration, improved access to resources, and prioritizing language assistance.

Again, using our conceptual framework (Figure 1.3), we delineate the key drivers for this subpopulation.

Population Profile

Prince George's County has a large number of foreign-born residents, the term used in the ACS to describe immigrants, and many are noncitizens. Almost 13 percent of County residents are noncitizen immigrants (Table 7.5). Compared to other councilmanic districts, District 2 has the highest percentage of residents who are noncitizen immigrants (35.4 percent).

Table 7.5.
Composition of Population by Place of Birth and Citizenship, by District

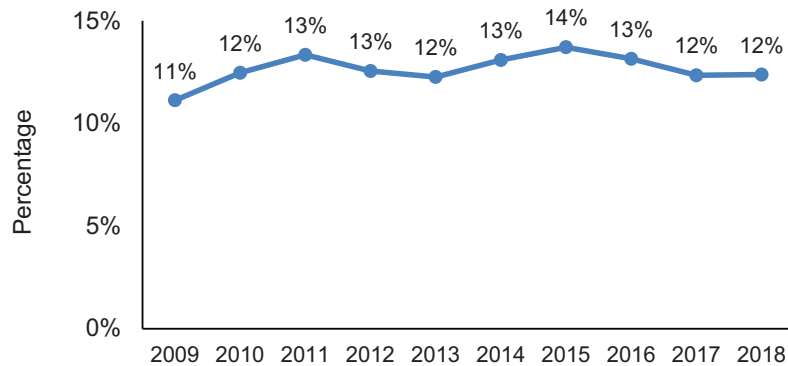
	County Councilmanic Districts									
	PG	1	2	3	4	5	6	7	8	9
Count of population										
Population, n	899,604	103,453	96,134	102,885	102,921	100,021	103,313	94,241	94,897	101,739
Native-born, n	696,565	69,204	49,577	68,372	82,285	75,953	91,323	86,194	80,663	92,995
Foreign-born citizen, n	87,364	16,932	12,510	13,946	11,694	10,819	7,080	2,964	6,108	5,312
Foreign-born noncitizen, n	115,675	17,318	34,047	20,567	8,942	13,250	4,910	5,084	8,126	3,432
Distribution of population										
Native-born	77.4%	66.9%	51.6%	66.5%	80.0%	75.9%	88.4%	91.5%	85.0%	91.4%
Foreign-born citizen	9.7%	16.4%	13.0%	13.6%	11.4%	10.8%	6.9%	3.1%	6.4%	5.2%
Foreign-born noncitizen	12.9%	16.7%	35.4%	20.0%	8.7%	13.2%	4.8%	5.4%	8.6%	3.4%

SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract.

The share of the County population that are noncitizen immigrants has been fairly stable over time, ranging from 14 percent in 2015 to 12 percent in 2018 (Figure 7.5).

Figure 7.5.
Percentage of County Population That Are Noncitizen Immigrants, 2009–2018



SOURCE: U.S. Census Bureau, 2019a.

NOTES: Data in figure were obtained from the American Community Survey 1-Year Summary Files, 2009–2018.

Across the County, noncitizen immigrants are more likely to be male, aged 18–39 years, and Hispanic than citizens (Table 7.6).

Table 7.6.
Characteristics of County Residents in 2018, by Citizenship and Place of Birth

	Citizens	Noncitizen Immigrants
Population, n		
Adults	579,298	116,844
Children	160,976	40,383
Sex, %		
Female	52.4	47.0
Male	47.6	53.0
Age, %		
Younger than 18 years	24.1	8.5
Aged 18 - 39 years	28.9	52.2
Aged 40 - 64 years	32.8	34.8
Aged 65 years or older	14.3	4.6
Race/ethnicity, %		
American Indian / Alaska Native	0.2	0
Asian	3.5	7.6
Black	65.6	29.2
Hispanic	13.5	59.8
Hawaiian / Pacific Islander	0	0
White	13.6	2.3
Two or more races	3.0	0.8

SOURCE: U.S. Census Bureau, 2018.

NOTES: Data in table were obtained from the American Community Survey 1-Year Public Use Microdata Sample (PUMS), 2018.

Health Outcome: Poor Health

Lack of access to health care is associated with worse health outcomes and anti-immigration policies have been shown to reduce access to health services and lead to worse mental health outcomes for noncitizen immigrants (Martinez et al., 2015). There is a vast literature describing the barriers to health care services experienced by noncitizen immigrants. These barriers range from legal barriers to obtaining health insurance, health system barriers related to discrimination, and other barriers related to cost, transportation, getting time off work, inability to navigate the health system, fear, and shame (Hacker et al., 2015).

Unfortunately, measuring the health of noncitizen immigrants in the County is challenging because this population is not identifiable in usual health surveys (e.g., BRFSS) nor in ED and hospital discharge data. To attempt to understand the health and health care needs of noncitizen immigrants in the County, we use ED and hospitalization discharge data to explore reasons for health care utilization in communities with a high density of noncitizen immigrants. Specifically, we examined ED and hospital utilization in communities (defined by ZIP Code Tabulation Areas (ZCTAs), the smallest unit of geography present in the discharge datasets) with a high percentage of noncitizen immigrants (hereafter referred to as “communities with more noncitizen immigrants”) and compare it to communities with a low percentage of noncitizen immigrants (hereafter referred to as “communities with fewer noncitizen immigrants”). Communities with a high percentage of noncitizen immigrants were defined as ZCTAs at or above the 80th percentile, i.e., having 21 percent or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as ZCTAs below the 80th percentile, i.e., having fewer than 21 percent of their population composed of noncitizen immigrants.

We find that children in communities with more noncitizen immigrants had more ED visits and hospitalizations than children in communities with fewer noncitizen immigrants (Table 7.7), whereas adults in communities with more noncitizen immigrants had slightly more hospitalizations than adults in communities with fewer noncitizen immigrants.

Table 7.7.
Rates of ED Visits and Hospitalizations per 100,000 Population, 2017

	Communities with Fewer Noncitizen Immigrants	Communities with More Noncitizen Immigrants
Adults		
ED discharge rate per 100,000	32,851	31,722
Hospital discharge rate per 100,000	10,675	10,714
Children		
ED discharge rate per 100,000	33,093	40,333
Hospital discharge rate per 100,000	2,477	3,185

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Rates are age-adjusted. Communities with a high percentage of noncitizen immigrants were defined as ZCTAs at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as ZCTAs below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants.

In Table 7.8, we described the ten most common reasons for ED visits for adults in communities with more noncitizen immigrants. The top five most common reasons for ED visits for adults were the same for communities with more or fewer noncitizen immigrants. Of note, the percentage of ED visits for pregnancy complications (2.0 percent vs. 3.2 percent) and open wounds of extremities (1.8 percent vs. 2.6 percent) was higher in communities with more noncitizen immigrants than communities with fewer noncitizen immigrants.

Table 7.8.
Most Common Reasons for ED Visits for Adults, Percentage of all ED visits, 2017

	Communities with Fewer Noncitizen Immigrants, %	Communities with More Noncitizen Immigrants, %
Sprains and strains	6.0	6.3
Chest pain	6.2	5.4
Abdominal pain	4.9	4.9
Back pain	4.9	4.6
Superficial injury or contusion	3.5	3.5
Related to birth: Other pregnancy complications	2.0	3.2
Urinary tract infections	2.7	3.1
Other upper respiratory infections	3.2	3.0
Headache, including migraine	2.7	2.8
Open wounds of extremities	1.8	2.6

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Reasons are Clinical Classifications Software (CCS) codes which group related diagnoses and procedures into meaningful categories. Communities with a high percentage of noncitizen immigrants were defined as ZCTAs at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as ZCTAs below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants.

In Table 7.9, we described the ten most common reasons for hospitalizations for adults in communities with more noncitizen immigrants. Half of the top ten reasons for hospitalizations were related to birth and complications of birth among adults in communities with more noncitizen immigrants.

Table 7.9.
Most Common Reasons for Hospitalizations for Adults, Percentage of all Hospitalizations, 2017

	Communities with Fewer Noncitizen Immigrants, %	Communities with More Noncitizen Immigrants, %
Septicemia (except in labor)	6.1	6.7
Related to birth: Other complications of birth; puerperium affecting management of mother	3.3	5.2
Hypertension with complications and secondary hypertension	5.4	4.3
Related to birth: Previous C-section	1.9	3.3
Related to birth: Prolonged pregnancy	1.6	3.2
Related to birth: Polyhydramnios and other problems of amniotic cavity	1.4	2.6
Acute cerebrovascular disease	2.9	2.4
Diabetes mellitus with complications	2.3	2.4
Related to birth: Other complications of pregnancy	1.4	2.0
Mood disorders	2.3	1.9

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Adults are aged 18 years and older. Reasons are Clinical Classifications Software (CCS) codes which group related diagnoses and procedures into meaningful categories. Communities with a high percentage of noncitizen immigrants were defined as ZCTAs at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as ZCTAs below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants.

In examining the most common reasons for ED visits for children, ED visits for other upper respiratory infections, viral infections, and ear infections and related conditions were all more common among children living in communities with more noncitizen immigrants (Table 7.10).

Table 7.10.
Most Common Reasons for ED Visits for Children, Percentage of all ED visits, 2017

	Communities with Fewer Noncitizen Immigrants, %	Communities with More Noncitizen Immigrants, %
Other upper respiratory infections	11.2	13.1
Viral infection	4.5	5.5
Ear infections and related conditions	3.4	5.4
Other injuries and conditions due to external causes	4.9	3.9
Superficial injury; contusion	4.5	3.7
Other gastrointestinal disorders	2.4	3.3
Intestinal infection	1.7	3.2
Sprains and strains	3.5	3.0
Fever of unknown origin	2.8	2.9
Asthma	3.9	2.8

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Reasons are Clinical Classifications Software (CCS) codes which group related diagnoses and procedures into meaningful categories. Communities with a high percentage of noncitizen immigrants were defined as ZCTAs at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as ZCTAs below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants.

Children in communities with more or fewer noncitizen immigrants shared the same top four reasons for hospitalizations (Table 7.11). For children living in communities with more noncitizen immigrants, 5.7 percent of hospitalizations were due to acute bronchitis compared to 3.7 percent of hospitalizations for children living in communities with fewer noncitizen immigrants. Additionally, the percentage of hospitalizations for children for appendicitis was 3.9 percent in communities with more noncitizen immigrants compared to 1.5 percent for children in communities with fewer noncitizen immigrants. Appendicitis is not preventable. Individuals at higher risk of appendicitis include those with family history of appendicitis, cystic fibrosis, and those who are White or Hispanic (Anderson, Bickler, Chang, & Talamini, 2012).

Table 7.11.
Most Common Reasons for Hospitalizations for Children, Percentage of all Hospitalizations, 2017

	Communities with Fewer Noncitizen Immigrants, %	Communities with More Noncitizen Immigrants, %
Acute bronchitis	3.7	5.7
Asthma	6.7	5.1
Mood disorders	7.1	4.9
Pneumonia	4.5	4.5
Respiratory failure; insufficiency	3.6	4.2
Related to birth: Other complications of birth; puerperium affecting management of mother	2.3	4.0
Epilepsy; convulsions	3.5	3.9
Appendicitis and other appendiceal conditions	1.5	3.9
Other perinatal conditions	3.4	3.7
Sickle cell anemia	4.3	2.4

SOURCE: Maryland Health Services Cost Review Commission, 2017; DC Hospital Association, 2017.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents. Reasons are Clinical Classifications Software (CCS) codes which group related diagnoses and procedures into meaningful categories. Communities with a high percentage of noncitizen immigrants were defined as ZCTAs at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as ZCTAs below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants.

Drivers of Health for Noncitizen Immigrants

Although our data sources do not allow us to directly link drivers of health and health outcomes among this subpopulation, below we seek to explore potential drivers of the aforementioned measures of health and health care use.

Health Service Environment: Health Insurance

Obtaining health insurance can be challenging for noncitizen immigrants. Medicare, the federal health insurance program for seniors, limits benefits to citizens and green card holders. In Maryland, noncitizens who are lawfully present in the United States, and meet certain criteria may be eligible for Medicaid or Maryland's Children's Health Program (MCHP), the state's health insurance programs for low-income individuals (Maryland Department of Health, 2019a). However, many adult immigrants who may be eligible for Medicaid must wait five years to be eligible for services, per Federal law. Even when noncitizens immigrants are eligible for government-sponsored health insurance or health care programs, many may delay seeking care for fear of deportation or other repercussions. Additionally, English language proficiency and literacy are additional barriers to obtaining health insurance, as well as barriers to using health insurance.

In 2018, 44.3 percent of noncitizen immigrants in the County were uninsured compared to 5.5 percent of citizens. As mentioned in the prior section, adults in communities with more noncitizen immigrants had higher rates of ED visits for pregnancy complications. It is possible that this finding may be correlated with lack of health insurance, which may make it challenging for pregnant women to obtain prenatal care.

Table 7.12.
Characteristics of County Residents, by Citizenship and Immigration, 2018

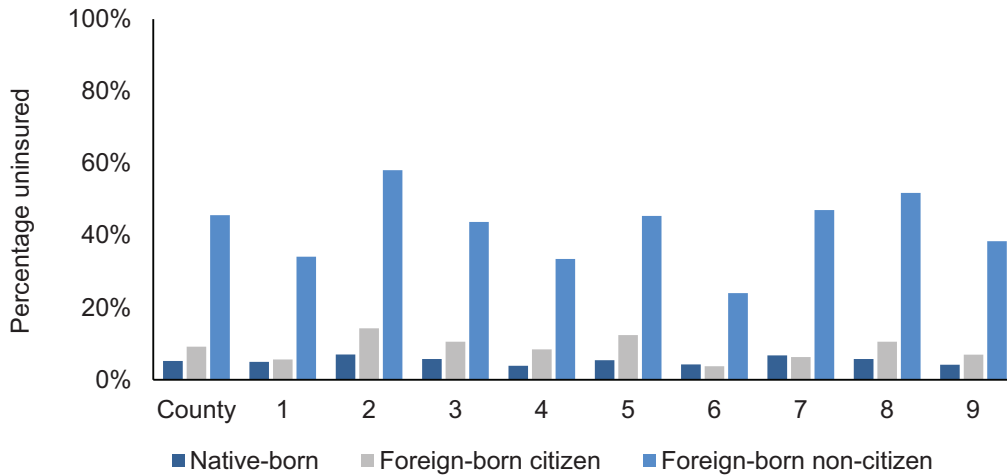
	Citizens, %	Noncitizen Immigrants, %
Uninsured	5.5	44.3

SOURCE: U.S. Census Bureau, 2018.

NOTES: Data in table were obtained from the American Community Survey 1-Year Public Use Microdata Sample (PUMS), 2018

The next two figures help to describe how districts throughout the County are differentially impacted by this driver of health. As illustrated by Figure 7.6, lack of health insurance for noncitizens is highest in District 2 (58.1 percent) and District 8 (51.8 percent). When examining characteristics of the uninsured by place of birth (Figure 7.7), we see that noncitizens compose the greatest share of the uninsured in Districts 2 and 3 (79.1 percent and 62.5 percent, respectively). Conversely, native-born citizens compose the greatest share of the uninsured in Districts 6 (72.9 percent), 7 (69.3 percent), 8 (48.8 percent), and 9 (69.6 percent).

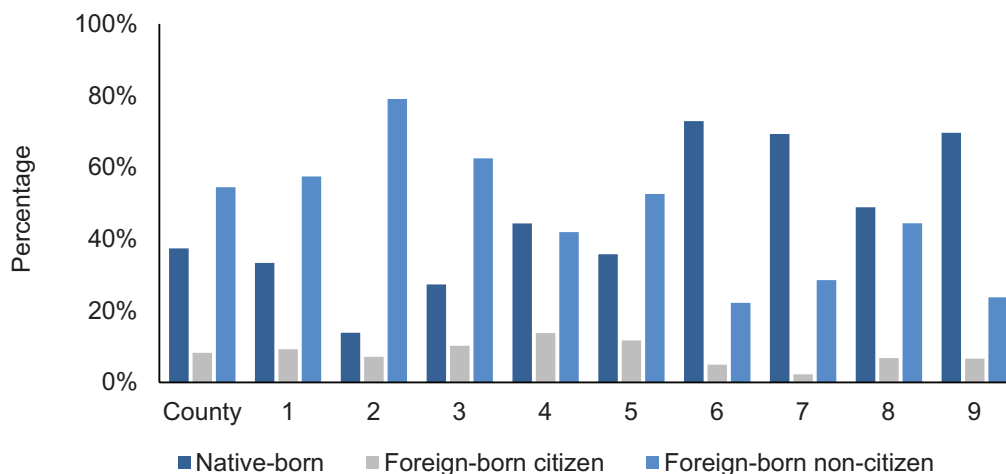
Figure 7.6.
Uninsurance Rates by District and by Place of Birth, Pooled 2014–2018



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract. Denominator of these percentages is the total population within each category of district and native born, foreign-born citizen, and foreign-born noncitizen. Numerator is the number of uninsured within each of those categories.

Figure 7.7.
Percentage of Uninsured Individuals by District and by Place of Birth, Pooled 2014–2018



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Data in table were obtained from the 5-year estimates from the 2014–2018 American Community Survey, which provide estimates aggregated across years at the census tract. Denominator of these percentages is the total number of uninsured individuals within each category of district and native born, foreign-born citizen, and foreign-born noncitizen. Numerator is the number of uninsured within each of those categories.

Social and Economic Environment: Socioeconomic Status and Education

As was previously noted, noncitizen immigrants face barriers to health care related to the social and economic environments (Hacker et al., 2015). Noncitizen immigrants in Prince George's County are more likely to have characteristics associated with worse health and worse access to care than citizens. Specifically, noncitizen immigrants are more likely to live in households with limited English proficiency, have less education, be considered working poor, and live in poverty (Table 7.13). Regardless of citizenship, these factors are associated with worse access to care and worse health outcomes (Centers for Disease Control and Prevention, 2011; Shi, Lebrun, & Tsai, 2009). Coupled with the challenges encountered by noncitizen immigrants, these factors may have an even greater impact.

Table 7.13.
Characteristics of County Residents in 2018, by Citizenship and Immigration

	Citizens, %	Noncitizen immigrants, %
English Proficiency		
Limited English-speaking household	4.8	33.6
Educational attainment		
Less than high school education	5.0	36.0
Measures of SES		
Working poor	2.3	6.5
Income below poverty level	10.8	20.9

SOURCE: U.S. Census Bureau, 2018.

NOTES: Data in table were obtained from the American Community Survey One-Year Public Use Microdata Sample (PUMS), 2018.

In the health outcomes section above, we noted that children living in communities with more noncitizen immigrants had more ED visits than children in communities with fewer noncitizen immigrants. We cannot be sure if this indicates more urgent needs among this population, or if some of these visits would have been better managed in a nonurgent settings. If these visits are not for urgent needs, these children are receiving more costly and less coordinated care than is preferred. Further, given that this population has high rates of uninsurance and social and economic drivers of health, greater study of the needs of this population is warranted.

Built Environment: Housing Costs and Overcrowding

There is a well-established connection between housing and health (Sharpe et al., 2018). For example, overcrowded housing is associated with respiratory problems and poor physical health for children (Levanthal & Newman, 2010). Further, housing conditions, such as overcrowding, have been associated with impaired mental health, stress coping, sleep, and increased risk of medical conditions (Cutts et al., 2011). Housing costs represent the largest budget item for most families and families have less money to spend on food, transportation, and health care when a high share of their monthly income is spent on housing. People living in unaffordable housing are more likely to have poor health and report not receiving needed health care due to cost (Meltzer & Schwartz, 2016; Pollack, Griffin, & Lynch, 2010). Thus, ensuring families have access to safe and affordable housing may keep them healthier. When thinking about the housing experiences of immigrant populations, research suggests that noncitizen immigrants are more likely to live in crowded housing than citizens (Blake, Kellerson, Simic, & Task, 2007; McConnell, 2015) and that crowded housing is more common among Hispanic populations than white populations (Burr, Mutchler, & Gerst, 2010). This literature relates to our findings that upper respiratory infections and viral infections were more common among children living in communities with more noncitizen immigrants.

To better understand the housing experience of noncitizen immigrants in the County, we would ideally use a granular dataset that describes where every individual lives in the County and the characteristics of their housing experience (e.g., condition of housing, indicators of overcrowding, amount spent towards housing). While some housing information is available at the county-level for noncitizen immigrants, it is not available at a more granular community-level. Therefore, we present county-level information on the housing experiences of noncitizen immigrants and also utilize information from the American Community Survey to better understand the housing experiences of communities with a higher percentage of noncitizen immigrants compared to communities with few noncitizen immigrants. To do this, we identified communities with a high percentage of noncitizen immigrants (hereafter referred to as “communities with more noncitizen immigrants”) and compare it to communities with a low percentage of noncitizen immigrants (hereafter referred to as “communities with fewer noncitizen immigrants”). Communities with a high percentage of noncitizen immigrants were defined as census tracts at or above the 80th percentile, i.e., having 21 percent or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as tracts below the 80th percentile, i.e., having fewer than 21 percent of their population composed of noncitizen immigrants.

For noncitizen immigrants, 41.1 percent of households reported paying more than 30 percent of monthly household income towards housing costs. Additionally, 17.6 percent of non-citizen immigrant households reported paying more than 50 percent of monthly household income towards housing costs compared to 12.4 percent of citizen households. Compared to citizens in Prince George's County, noncitizen immigrants are more likely to live in overcrowded or severely overcrowded housing (Table 7.14). For noncitizen immigrants, 17.3 percent of households are overcrowded (i.e., have more than 1 person per room) and 5.4 percent are severely overcrowded (i.e., have more than 1.5 people per room).

Table 7.14.
Percentage of Residents Experiencing Housing Problems, 2018

	Citizens, %	Noncitizen immigrants, %
Housing cost burden		
% Households paying more than 30% of monthly household income towards housing costs	28.5	41.1
% Households paying more than 50% of monthly household income towards housing costs	12.4	17.6
Overcrowded housing		
Not overcrowded (<1 person per room)	92.8	77.3
Overcrowded (>1 person per room)	3.7	17.3
Severely overcrowded (>1.5 people per room)	1.3	5.4

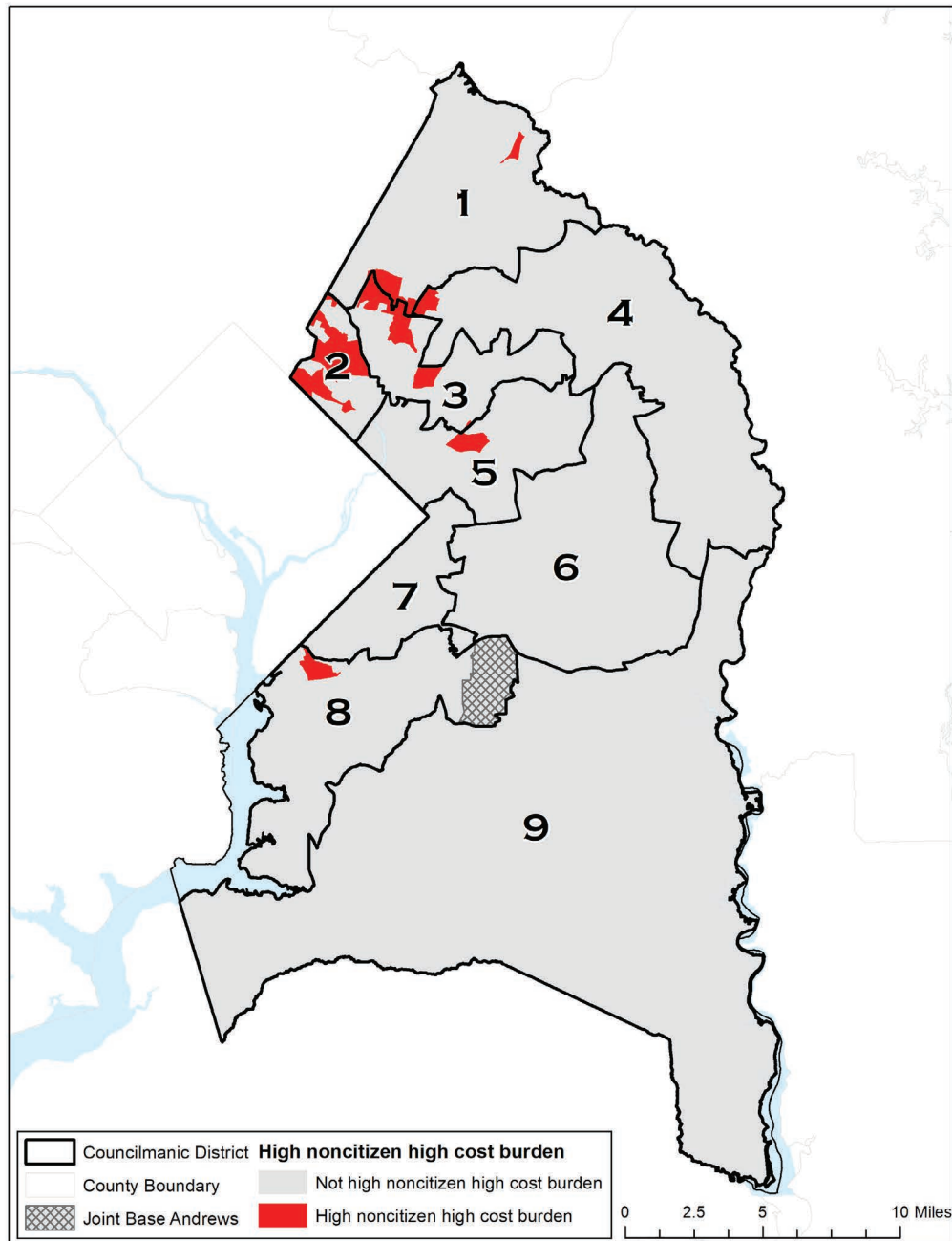
SOURCE: U.S. Census Bureau, 2018.

NOTES: Data in table were obtained from the American Community Survey 1-Year Public Use Microdata Sample (PUMS), 2018.

Figure 7.8 illustrates “hot spots” of simultaneous high rates of high housing-cost burden and noncitizen immigrants. These hot spots are primarily in Districts 2 and 3, but also observed in Districts 1, 4, 5, and 8. As observed with the housing overcrowding hot spot map, these hot spots are primarily clustered in the northwest part of the County.

Figure 7.9 illustrates the locations of communities where there are more noncitizen immigrants and also a high percentage of housing with severe overcrowding. As illustrated by the red, these “hot spots” of communities with high rates of severely overcrowded housing and noncitizen immigrants are primarily in District 2 and primarily clustered in the northwest part of the County.

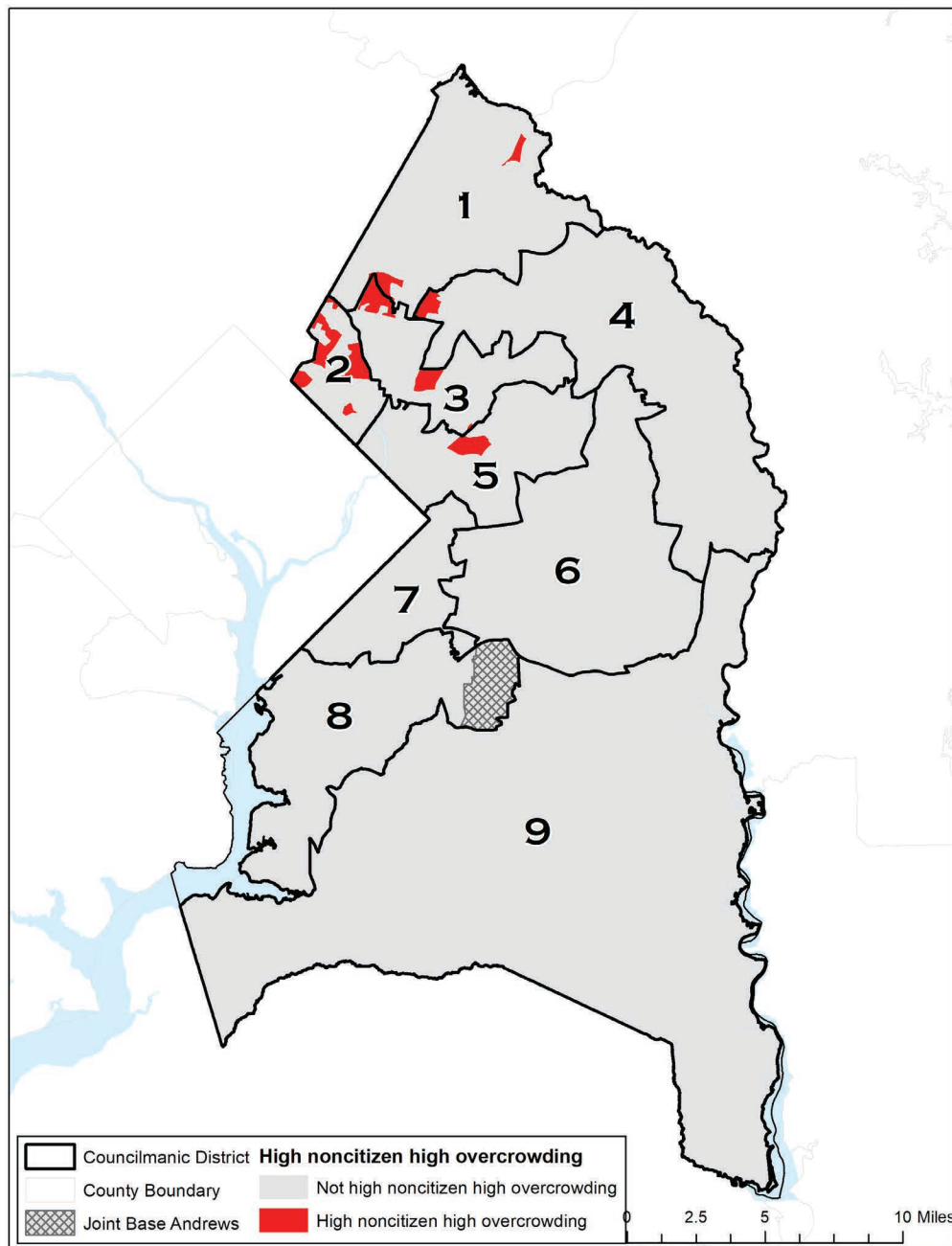
Figure 7.8.
Location of Communities with High Housing Cost Burden and More Noncitizen Immigrants,
Pooled 2014–2018



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Communities with a high percentage of noncitizen immigrants were defined as census tracts at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as tracts below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants. Communities with a high percentage of households reporting high housing cost burden were defined as census tracts at or above the 80th percentile, i.e., having 20% or more of households reporting paying more than 50% of monthly household income towards housing costs. Communities with fewer households reporting high housing cost burden were defined as census tracts below the 80th percentile, i.e., having fewer than 20% households reporting paying more than 50% of monthly household income towards housing costs.

Figure 7.9.
Location of Communities with Severe Overcrowding and More Noncitizen Immigrants,
Pooled 2014–2018



SOURCE: U.S. Census Bureau, 2019b.

NOTES: Communities with a high percentage of noncitizen immigrants were defined as census tracts at or above the 80th percentile, i.e., having 21% or more of their population composed of noncitizen immigrants. Communities with a low percentage of noncitizen immigrants were defined as tracts below the 80th percentile, i.e., having fewer than 21% of their population composed of noncitizen immigrants. Communities with a high percentage of severely overcrowded households were defined as census tracts at or above the 80th percentile, i.e., having 2.2% or more of households reporting severe overcrowding. Communities with fewer severely overcrowded households were defined as census tracts below the 80th percentile, i.e., having fewer than 2.2% households reporting severe overcrowding.

Summary

This chapter is intended to highlight key linkages of drivers of health and health outcomes for two high profile subgroups: children and noncitizen immigrants. Our goal for this chapter is to facilitate discussions about the needs of these groups given the demographic changes in the County. These analyses are also intended to spur further thinking and analyses about other subgroups and the drivers of health that may be most salient to them. This chapter also can be used as the County progresses toward *Health in All Policies*, and must consider holistic policies and resource allocation to address drivers of health together.

For children, our examination of drivers of health impacting receipt of preventive care highlight the social factors that can create barriers to preventative care for children. In Prince George's County, high rates of ED visits for children occur in Districts 2, 3, 5, 7, and 8. These districts also have a high prevalence of social factors that can create barriers to preventative care for children, including poverty, lack of health insurance, transportation barriers, and a shortage of health care providers. These factors likely play a role in childhood health disparities in the County, but further analysis is needed to understand the magnitude of these relationships.

Additionally, childhood overweight and obesity, which can lead to chronic health conditions in children and adults, is a priority public health concern in the County. The prevalence of childhood overweight and obesity in the County has increased over time and is particularly high in Hispanic youth. Health behaviors that may contribute to weight gain, including poor dietary intake and low physical activity are also on the rise in the County. These behaviors are highest among Hispanic or Black youth. Poor food environments exist in some areas of the County, but it is not clear how strong of a relationship exists between the food environment, health behaviors, and childhood obesity; understanding the associations between these factors deserves further attention in the County.

Our closer look into noncitizen immigrants demonstrated the multiple drivers of health shaping the health of this subpopulation. Noncitizen immigrants are an extremely vulnerable subgroup in the County given their high rates of poverty and housing cost burden and low rates of educational attainment. Data limitations hindered our ability to make strong linkages between health outcomes and drivers of health, but our exploration of drivers of health highlight key concerns. These challenges are pronounced in District 2, where there are clusters of noncitizen immigrant communities living in overcrowded housing with high cost burdens. Almost half (44 percent) of noncitizen immigrants lack health insurance. We found that children in communities with more noncitizen immigrants made more ED visits and had more hospitalizations than children in communities with fewer noncitizen immigrants. This may reflect greater need or may reflect worse access to primary care, which can help to better manage nonurgent health problems and prevent health conditions from getting worse and requiring hospitalization. When examining common reasons for adult hospitalizations, we found that five of the ten most common reasons for hospitalizations were related to birth and complications of birth for residents of communities with a high percentage of noncitizen immigrants. Lack of access to, or utilization of, preventive care, potentially due to lack of health insurance, may be driving these higher rates of hospitalization for these diagnoses.

Although it was beyond the scope of this work to conduct a comprehensive exploration of linkages between drivers of health and health outcomes for all subgroups, this type of exploration can be informative for additional subgroups and health conditions. Here are possible next analyses:

- Examine the linkages between drivers of health and behavioral health conditions to facilitate cross sector collaborations and better track or allocate resources to behavioral health across County departments.
- Examine unique needs and health conditions of the working poor, by better linking social, built, economic and environmental drivers in data analysis and policy development.



Next Steps in Data Collection and Analysis

Conducting a more robust analysis linking *drivers of health to health outcomes* requires

- Individual level information on both health outcomes and drivers of health, in ways that are generalizable to a small geographic area, such as a county or a community within a county.
- Cross department, linked data systems that measure priority health concerns and also include health driver information.

8. Exploring Prince George’s County Budget for Health

Overview

One of the key challenges facing successful implementation of *Health in All Policies* is the effective alignment of resources and investments to meet health and well-being objectives. Too often, resource allocations are fragmented across departments or agencies, and are not consistent with where health is actually influenced, managed and/or produced. As a result, budgets may not be adequate to cover the health needs of a community or region or may not be organized in a way that government leaders and other stakeholders can “rack and stack” (i.e., organize information in ways that clarify what is actually being spent), which makes it difficult to link budget information with health outputs and health outcomes. In short, tracking the alignment of dollars across agencies that contribute to health is a key first step in being able to understand the true accounting of *health return on investment*.

In this chapter, we describe spending on health and human services in Prince George’s County, compare County spending to nearby counties, and describe County spending in other related departments that are influencing health, particularly in health service provision (e.g., Fire/EMS) and other drivers of health described in prior chapters. Where relevant, we pull from prior reports and analyses conducted by the County.

As the data available reflect government spending, the findings noted in this chapter should be interpreted accordingly. That is, there are programs and resources that influence health spending by the nongovernment sector (nonprofits, for-profit), which would be included in a fuller accounting of health spending in the County. For the purposes of this report, we focus only on government spending with attention to the executive departments.

Additionally, this chapter is meant as a first step towards understanding the County’s overall spending on health and drivers of health across departments. In light of national and local calls in 2020 to reimagine government provision of services such as policing, this kind of accounting and analysis is particularly useful. A comprehensive understanding of spending on health and drivers of health across departments requires detailed budget information to understand when and where funds are having an impact on health. This detail comes from a second level of coding, which would include extensive review of time spent by government staff as well as objectives and outcomes of programs and other services. This approach is possible, and has been successfully completed at the federal level, by coding executive department budgets (see www.cultureofhealth.org for the federal *Health in All Policies* measure). The following figure, Figure 8.1, outlines three levels of *Health in All Policies* coding and analysis.

Figure 8.1.
Levels of *Health in All Policies* Budget Analysis

1. Capture aggregate health costs, inclusive of programs addressing drivers of health as well as health services (health care, health education, health promotion, etc.).
2. Assess exact costs associated with specific programs, including staff time spent and costs associated with programs with proximal vs. distal influences on health outcomes.
3. Link comprehensive cost analysis with information on effectiveness of services and programs (e.g., improved health outcomes).

Following this path, the information presented in this chapter uses the high-level budgetary information provided via County fiscal year budget plans and begins to capture aggregate health costs. In addition to summarizing this information, the chapter is organized to help the County consider cross-department spending on health and drivers of health.

Subsequent coding and analysis could be conducted (often with more detailed spreadsheets and other financial and time data) to pursue steps 2 and 3 in Figure 8.1. For *health return on investment*, more information would be needed consistently across general fund and grant programs with respect to program or service effectiveness. Because that data is not yet available, we offer potential next steps for County action with respect to health budgeting and investment alignment in the final recommendations chapter. We accompany that chapter with a proposed budget template to orient planning, which can be used to aid steps 2 and 3 in Figure 8.1 (see Appendix D).

County Spending on Health and Human Services

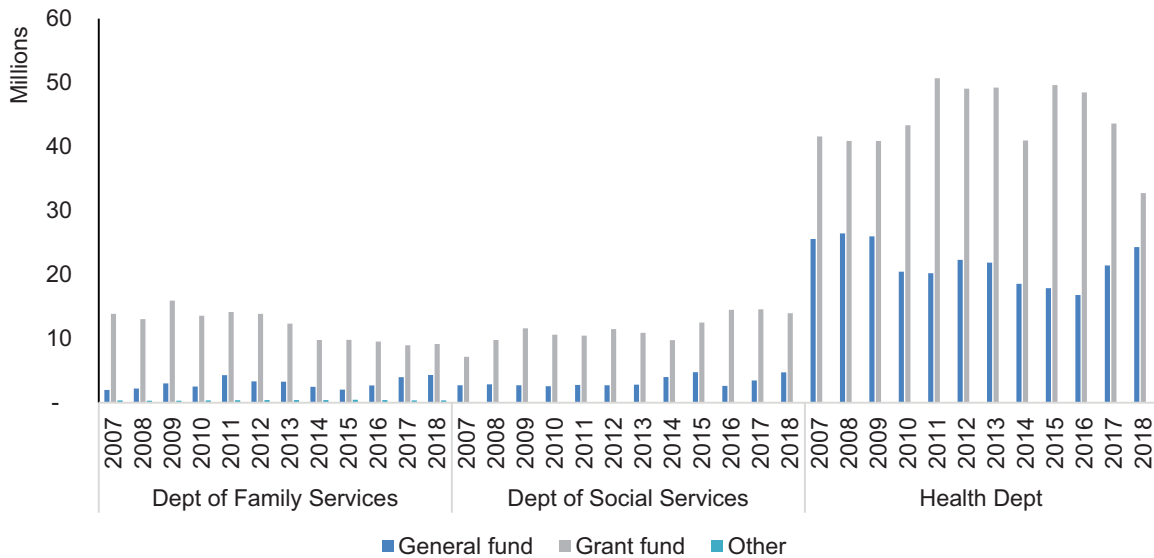
It is first useful to summarize County health spending specifically from the executive departments focused on health and human services—that is the Health Department, Department of Social Services, and Department of Family Services. The County has conducted some analysis of investments in different sectors of government, demonstrating low growth in human service funding compared to other sectors (Prince George's County, 2019c). The County found that, between FY2007 and FY2017, Family Services had an 18 percent decrease, Health had a 3 percent decrease, and Social Services had an 83 percent increase in overall funding.

The RAND study team also analyzed the County's FY2007 to FY2018 budget information (Figure 8.2), with particular focus on the mix of general and grant funds. Prince George's County health and human service departments are primarily grant funded. In FY2018, the percentage of each agency's overall budget covered by grant funds was as follows: Family Services = 66.2 percent, Social Services = 74.7 percent, Health = 57.4 percent. Our comparison of approved budgets for the Departments of Health, Social Services, and Family Services in FY2007 and FY2018 found a 10 percent increase in general funds supporting human services (about \$3.1 million), but an approximate decrease in funds (about \$6.8 million) coming from grant monies. The proportion of grant funds to the total funding overall has decreased by 7 percent since 2007, which is a direct result of increased general funds and decreased grant monies. In FY2019 (Figure 8.3), the general fund contributed approximately \$37.5 million to

human services (approximately \$26.5 million to Health, \$5.6 million to Family Services, and \$5.4 million to Social Services). However, approximately \$74.9 million in funding came from grants (approximately \$47.7 million to Health, \$10.2 million to Family Services, and \$17 million to Social Services).

One of the chief concerns raised by stakeholders is the ability to truly fund comprehensive health approaches with the existing budget if the proportion of funds is tilted towards grant monies, as there can be stability issues with grants. Grants are often limited in number of years, subject to funding changes over time, and require work (e.g., staff time) to obtain. Moreover, grants are typically focused on specific goals and objectives, which limits or prevents funding flexibility. Stakeholders also expressed concern that the total investments directed to health and human services in the County is low (a point raised in the next section about relative County department budget allocations (see Chapter Nine for an associated recommendation).

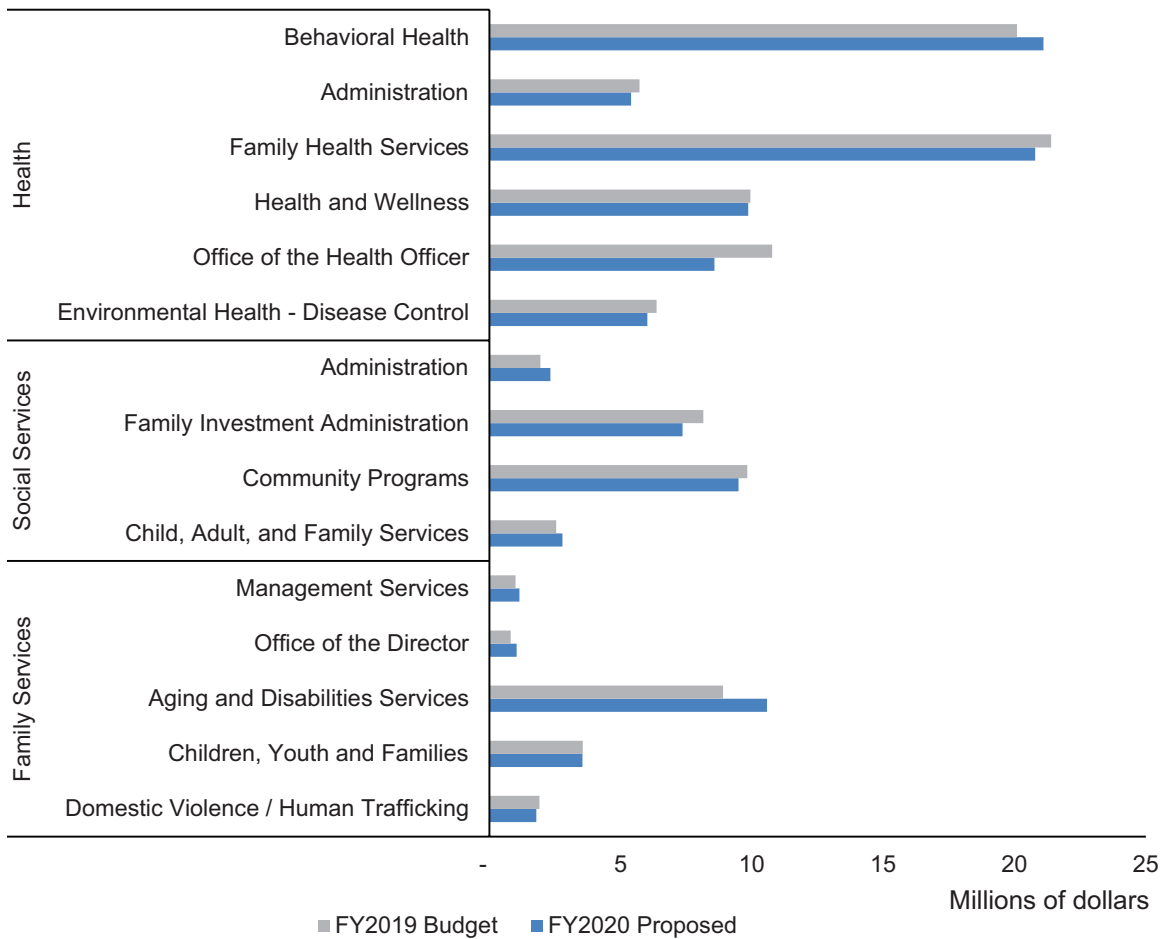
Figure 8.2.
County Human Services Budget, FY2007–FY2018 (actual funds in \$)



SOURCE: Prince George’s County, 2019a.

Figure 8.3 outlines the relative distribution of funding by each health and human service department and by type of funding. For instance, most of the proposed funding in FY2020 is for behavioral health and family health services. However, it is also important to note that “family related services” cut across all three departments and as such, health services (not just clinical care, but health promotion, health education, ancillary health) could be provided in those funding line items. As noted in Figure 8.1 on cost analysis levels, a next tier of analysis would more closely detail and code all of the programs and services that are contained in this grouping. While the County budget information has important information on types of services and specific grant programs, more accurate coding of program documents (objectives, aims, populations served, outcomes) is needed to get this level of specificity.

Figure 8.3.
Human Service Department Budgets by Topic Area, FY2019 and FY2020 Proposed Budgets



SOURCE: Prince George's County, 2019a.

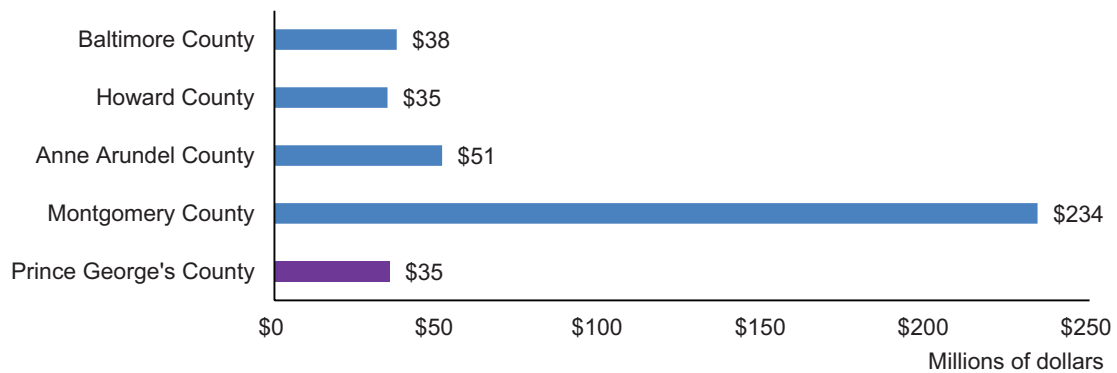
NOTES: Total department budgets (2019 budget and 2020 proposed) were provided by the Prince George's County Council.

Health and Human Services Spending Relative to Neighboring Counties

Related to the stakeholder concern of total resources to health and human services, it is also useful to examine how the County compares to neighboring counties.

Prince George's County along with Baltimore County have health and human service departments that are majority grant funded (Prince George's County, 2019c), but Prince George's County relative to Howard, Montgomery, Anne Arundel, and Baltimore Counties in Maryland has the lowest general fund approved health spending, as of FY2018 (Figure 8.4). These differences remained even when adjusting for population size and examining spending on health and human services per person (Figure 8.5). It should be noted that under a grant agreement with the Maryland State Department of Human Services, state social service and public assistance programs have been administered by Montgomery County Government since October 1, 1996. In other jurisdictions, these services are administered by the State and County funded local offices.

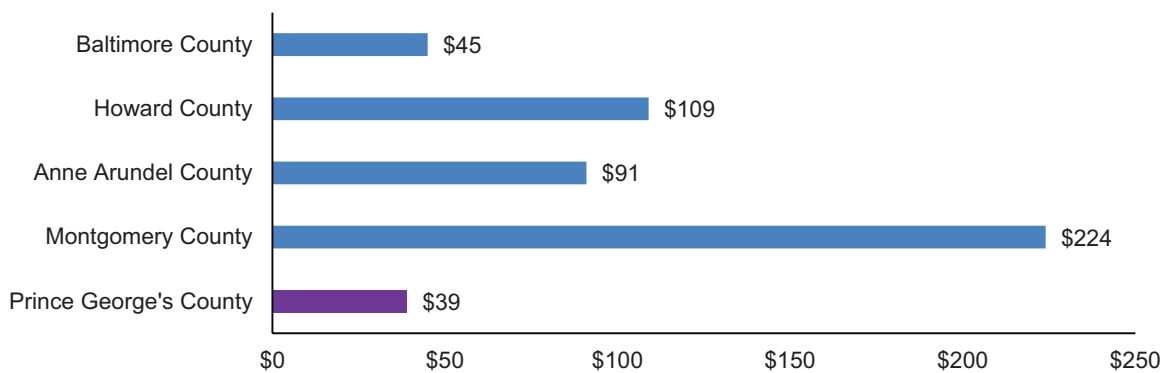
Figure 8.4.
Total FY2018 General Fund Budget for Health and Human Services, by County (in millions)



SOURCE: Prince George's County, 2019c.

NOTES: Data was provided in an internal county presentation and conglomerates internal health and human services agencies from FY 2007 to FY 2018.

Figure 8.5.
Total FY2018 General Fund Budget Spending for Health and Human Services per Person, by County

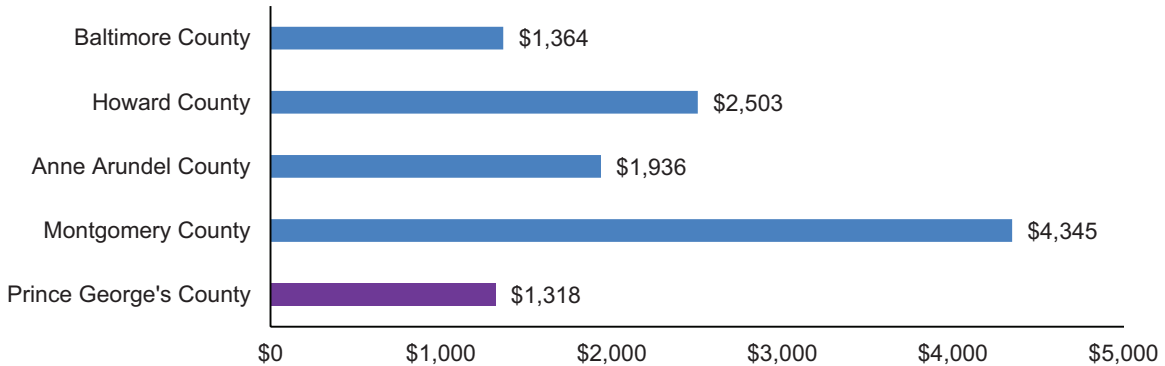


SOURCE: Prince George's County, 2019c.

NOTES: Data was provided in an internal county presentation and conglomerates internal health and human services agencies from FY 2007 to FY 2018.

When looking at spending for populations most in need, Prince George's County also spends less than nearby counties (Figure 8.6). Using this same FY2018 analysis, the spending per person living in poverty was the lowest in Prince George's County (\$1,318) versus Montgomery County (\$4,345), Anne Arundel County (\$1,936), Howard County (\$2,503), or Baltimore County (\$1,364).

Figure 8.6.
Total FY2018 General Fund Budget Spending for Health and Human Services per Person in Poverty, by County



SOURCE: Prince George's County, 2019c.

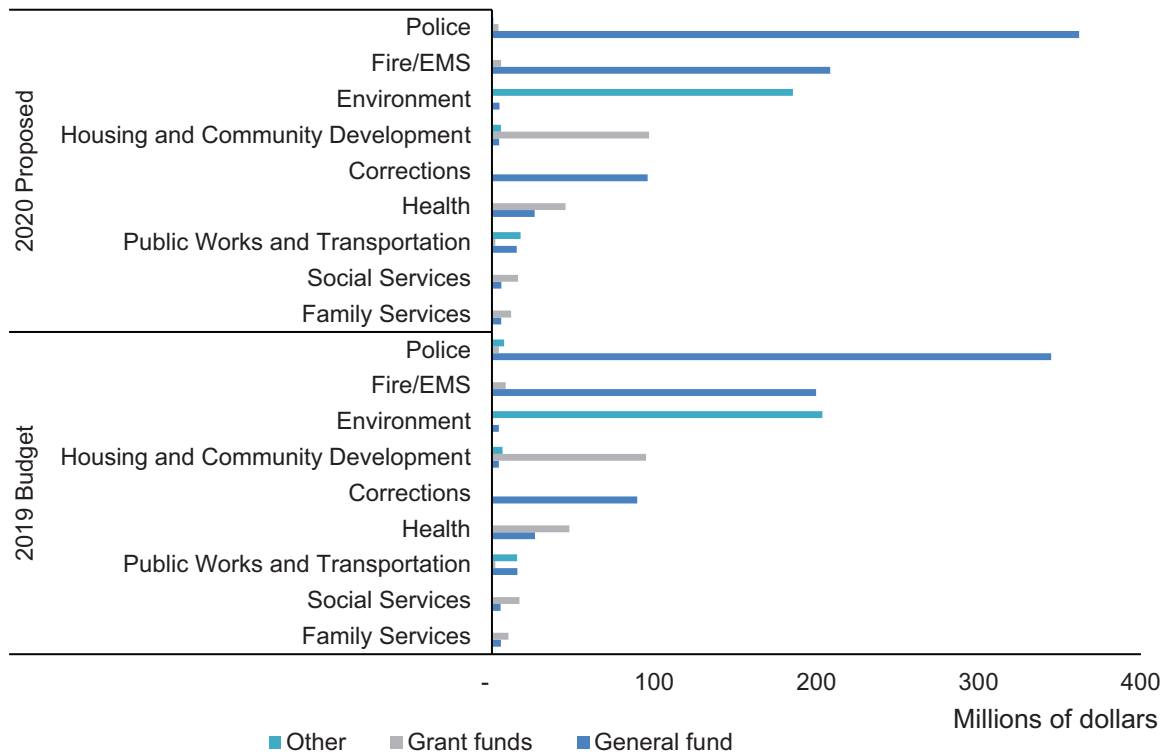
NOTES: Data was provided in an internal county presentation and conglomerates internal health and human services agencies from FY 2007 to FY 2018.

County Health Spending Outside of Health and Human Services

As has been described in depth throughout this report, a broad array of executive branch departments in the County contribute to residents' health and health care utilization. The objective of this section is to begin to illustrate budget allocations that are linked to health but are not occurring in the health and human service departments (health, family services, or social services). This section is meant to outline potential ways the County can organize health information across departments, in order to position for deeper analyses of spending, outcomes, and *health return on investment*.

The County puts forth its actual and anticipated budgets by department each year. These reports include important performance metrics and some outcomes. Figure 8.7 illustrates the side by side budget allocations and the proposed FY2020 budget by County department. As illustrated by Figure 8.7, the vast majority of total funds are allocated to the Police and Fire/EMS Departments, while the health and human services departments have much lower overall budgets.

Figure 8.7.
Budgets for Selected County Departments, FY2019 and FY2020 (budgets/proposed, in \$)



SOURCE: Prince George's County, 2019a.

When looking at these data as well as the County comparisons in the last section, it can appear as though health and human services are underfunded. Also, the accounting of health spending by health and human services departments may not be fully representative of total County health costs. A deeper analysis is important for understanding what types of health funding exist, for what services, and for what populations.

As noted in prior chapters, we know that health services are being offered outside of the purview of health and human services departments, and health drivers emerge outside the purview of the health department as well. It can be useful to determine what is actually being spent through these categorizations and not simply what is being allocated to human services departments with the formal label of “health.”

In our initial framework (Figure 1.3), we outlined the four environment areas that drive health: health service, social and economic; natural; and built. In the remaining sections, we briefly outline these drivers and some of the considerations in associated County funding. The information in the next sections are examples only and not meant to comprehensively account for all funding for drivers of health.

Health Service Environment

First, it is useful to describe health service spending beyond the traditional health and human service agencies. As noted in the report, Fire/EMS and Corrections play a key role in the delivery of health care services.

The mission of **Fire/EMS** is to “improve the quality of life in Prince George’s County by promoting safety and providing the highest quality of fire prevention, fire protection, emergency medical services, and community outreach programs.” We know from prior chapters that 80 percent of calls are for medical services. Of calls for medical services, 25 percent are for nonurgent medical services.

Due to the inefficient use of 911 for nonurgent medical services, Fire/EMS continues to expand the Mobile Integrated Healthcare unit’s work with frequent users of 911. The unit is cited (as of Fire/EMS FY2020 budget documents) to have realized “a 45 percent reduction in demand and a 52 percent reduction in hospital transports in this frequent user population” (Prince George’s County, 2019b) Most of the health care efforts are under the Emergency Operations Command function of Fire/EMS, which has a FY2020 budget of \$139,110,500 (this budget includes coordination of firefighters, paramedics, and volunteers).

While deeper coding of allocations would be required to truly assess the exact dollars going to provision of medical services versus rescue, ancillary or other services, it is useful to call out this line item for two reasons. First, it is a major contributor to overall, true County health spending. Second, this spending should be viewed in addition to what health and human services agencies are spending to identify areas of inefficiency. For instance, if there are programs in Human Services that are working to prevent frequent use of 911 or get ahead of chronic disease management for those who are frequent users of emergency departments, those efforts have to be balanced against what is being spent on the Mobile Integrated Healthcare Unit to make sure total expenditures are logical for the outcomes being sought (e.g., timely and appropriate use of health care, reduction in avoidable use of services). It would be useful to assess not only impact on reduced services but the overall benefit-cost to the health system.

Further, in the context of an approach such as global health budgeting (examining where health services are happening irrespective of department or agency and budgeting by service line), questions emerge about whether there should be a budget line item for *acute health response and related supports* that might cut across some programs and structures, such as the Mobile Integrated Healthcare unit with Mobile Crisis Response funded through the Health Department or other crisis response programs. Further, some of the grant programs through the Health Department are in the vein of acute response, yet because they are grants, are subject to more disruption potential than general funds, which comprise the vast majority of Fire/EMS’s budget.

Finally, in a *Health in All Policies* budget process, reviewing increases in spending to respond to acute calls versus spending related to prevention and health promotion also must be viewed together. Ideally, a health budget is commensurate with a holistic, health promotion orientation to prevent problems before they occur.

As noted previously in this report, **Corrections** provides health services to incarcerated individuals and medical evaluations as part of standard booking procedure in the correctional facility. Moreover, the department’s mission is “to provide detention and reentry services in order to ensure the community’s safety,” and the core services include rehabilitative services. For instance, the Inmate Services division focuses on reintegration, which includes health-related programs such as substance use counseling, health education, and recreational activities (total FY2020 budget, \$2,291,500). There are also relevant grant funds that flow through Corrections, but have close ties to health outcomes, such as the mental health unit (\$85,400). Importantly, Corrections serves a population with a high burden of behavioral health conditions. Given the significance of behavioral health issues in the County, capturing the entire

costs of behavioral health across County departments (services, prevention, education), and mapping that against health and well-being outcomes is important to assess gaps or redundancies in funding as well as overall impact.

There are also health services being provided through County support of the **school system**. The County funds school-based health services and some basic social services (the FY 2021 proposed budget was \$21.5 million for school-based health services, and psychological services totaled \$12.7 million).

Again, in the context of *Health in All Policies*, reviewing budgets outside of the health and human services agencies helps to illustrate how other agencies are working to address health and health care needs of residents. Next steps should follow Figure 8.1 on cost analysis levels. This would allow for more detailed coding of amount of services being provided, at what staff levels, and for what populations.

Social and Economic Environment

In Figure 1.3, we described some of the key domains in the social and economic environments, namely poverty, education, employment and safety. All of these domains are essential parts of the social and economic drivers of health. Too often, however, the costs that are accrued to ensuring public safety or addressing poverty are not accounted for as part of what influences health and well-being. We use these two example areas as illustrative only.

Ensuring Public Safety

As noted earlier, public safety costs total more than \$775 million for the County in the FY2020 budget. While all of the public safety programs directly or indirectly influence health and well-being through a range of efforts for access to justice as well as safe and secure neighborhoods, some of the more proximal costs are included in these line items in Table 8.1. Caution should be used as more detailed coding would be required to more directly link health-related activities within these sub-department budgets. Further, these illustrations focus on general funds.

Table 8.1.
Public Safety Budget with Proximal Links to Health

Department (<i>with example programs that link to health</i>)	FY2020 Proposed Budget (General Fund only)
Fire/EMS	
Emergency Operations Command (e.g., mobile health unit)*	\$139,110,500
Volunteer Services Command (e.g., supporting community volunteers)	\$21,465,300
Corrections	
Inmate Services*	\$2,291,500
Community Corrections (e.g., reentry services)	\$2,619,000
Police	
Bureau of Patrol (e.g., community policing)	\$182,559,000

SOURCE: Prince George's County, 2019a.

NOTES: Items in parentheses offer an example of programs in that budget line, but not meant to capture all programs covered. *Health services may be included in this budgeted amount. Thus, more detailed coding would need to be conducted to split out health services activities from public safety efforts.

Addressing Poverty

There are many programs in the County that either try to address chronic poverty or help those living in poverty. Table 8.2 provides an example accounting of those costs. Again, a more detailed coding on direct links to health would be warranted in a health budgeting effort, but this table provides a first place for consideration.

Table 8.2.
Addressing Poverty Efforts with Proximal Links to Health

Department (<i>with example programs that link to health</i>)	FY2020 Proposed Budget (General Fund only)
Housing and Community Development	
Housing and Community Development (e.g., home investment partnership)	\$1,574,900
Redevelopment (e.g., revitalizing distressed communities)	\$1,538,300
Social Services	
Community programs (e.g., food assistance)	\$2,233,500
Family investment (e.g., cash assistance)	\$247,500
Family Services	
Children, youth and families (e.g., youth services)	\$150,000

SOURCE: Prince George's County, 2019a.

NOTES: Items in parentheses offer an example of programs in that budget line, but not meant to capture all programs covered.

Natural Environment

Figure 1.3 noted the role of the natural conditions of a community to influence health, such as park availability, air, and water quality. Table 8.3 summarizes some of the costs associated with maintaining environmental quality and improving access to green spaces. Again, this table is only meant to be illustrative of funding going to drivers of health, though deeper coding against service effectiveness and health outcomes would be needed for health return on investment specifically.

Table 8.3.
Environment Programs with Proximal Links to Health

Department (<i>with example programs that link to health</i>)	FY2020 Proposed Budget (General Fund only)
Environment	
Office of Director (e.g., environmental planning)	\$228,400
Solid Waste Enterprise Management Fund (e.g., disposal of refuse)	\$106,459,500
Stormwater Management Enterprise Fund (e.g., control of storm and surface waters)	\$63,093,500
Health	
Environmental Health and Disease Control (e.g., outbreak investigations)	\$4,955,300

SOURCE: Prince George's County, 2019a.

NOTES: Items in parentheses offer an example of programs in that budget line, but not meant to capture all programs covered.

Built Environment

Finally, in Figure 1.3, we also described key domains in the built environment, namely housing, access to healthy food, and transportation. Some of the funding for areas like housing and access to healthy food can overlap with programs noted in the social and economic environments given the supports to pay for housing or nutrition, though this driver mostly focuses on the design and placement of houses, community design, and where food establishments are located and what they serve. For illustration in this driver, we focus on supports for transportation that may influence health (Table 8.4).

Table 8.4.
Transportation Efforts with Proximal Links to Health

Department (<i>with example programs that link to health</i>)	FY2020 Proposed Budget (General Fund only)
Transportation	
Transportation (e.g., parking programs)	\$1,228,500
Family Services	
Aging and Disability Services (e.g., case management)	\$2,072,400
Children, Youth, and Families (e.g., transportation services to appointments)	\$150,000

SOURCE: Prince George's County, 2019a.

NOTES: Items in parentheses offer an example of programs in that budget line, but not meant to capture all programs covered.

Summary

The data presented here are meant to provide a foundational view for considering what resources are going directly to health service provision, where funds are being allocated within and outside of health and human services departments, and to offer a new way of categorizing funding allocations against drivers of health. As noted throughout this chapter, this is only a first phase of budget analysis. More detailed documentation for each grant and general fund program, with information on exact services and sub-services being provided would be needed to code proximal and distal influences on health. That information would then be needed to link to effectiveness information to account for some measures of health return on investment. And, ideally, this information on government services would be combined with resources provided outside of government for a true health accounting. But, even a more holistic government health funding picture would be beneficial for successful implementation of *Health in All Policies*. As the County proceeds with *Health in All Policies*, potentially through global health budgeting, pursuing Steps 2 and 3 in Figure 8.1 will require sorting and aligning information as started in this chapter.

9. Conclusions and Recommendations

Overview

The Prince George's County Council, acting as the County Board of Health, is considering its future policy approach and resource allocation for health in the County. During the past decade, health care services in the County evolved, due to hospital mergers and acquisitions, state-level changes in hospital payments, and the Board of Health's engagement in health promotion efforts. Today, the County is committed to influencing and addressing factors that influence health beyond the health care system alone. The recommendations in this chapter are focused on how the County can move successfully forward to address all drivers of health (i.e., factors that promote or hinder good health) and well-being in a coherent and cohesive policy framework, focused on systems changes, inclusive of data and financing. As noted earlier, national and local conversations about government budgeting of services, such as policing, youth services, community investments, and mental health, provide critical motivation for many of the recommendations presented.

In prior chapters, we presented a complex picture of health in Prince George's County, highlighting the influences outside of the traditional health care delivery system. The framework presented in the first chapter of this report can be used as a way to organize the findings of this report and to also offer a guide to the County when considering future policy and program decisions to advance health and well-being. This framework illustrates how the social, economic, built, natural, and health service environments, along with longstanding historical and systemic inequities, collectively influence health and well-being. Further, it illustrates the interconnectedness of health investments. Importantly, this framework also offers a guide for how to think about a future *Health in All Policies* strategy for the County, and informs the recommendations offered below.

In this chapter, we briefly summarize key findings from our primary and secondary data analyses. Then, in the context of these findings, we offer recommendations for how the County can move forward in pursuit of a *Health in All Policies* strategy to promote residents' health and well-being. These recommendations emerged from the study team's analysis of the data and suggestions from stakeholders participating in the focus groups, town hall meeting, and interview discussions. Across the recommendations, we note which are suited for legislative action and/or coordination with departments in the executive branch. Additionally, we offer examples from other U.S. communities that may provide a useful case study or exemplar for Prince George's County, as the County advances further into its *Health in All Policies* approach to policymaking and governing efforts.

Summary

As the County embarks on a more integrated approach to health planning as the pathway to improve health and well-being, it is clear that County residents and leaders are aligned with that interest. As expressed by stakeholders, there is a particular interest in obtaining a better accounting of where and how health services are being provided, how human service supports can be leveraged to address upstream drivers of health, and what supports can be provided to community members to actively promote their health. Concerns were raised about health equity, and were specifically noted for growing populations in the County (e.g., Hispanic, non-citizen immigrant, and senior residents) as well as those key to the social and economic future of the County (e.g., children).

In the last decade, concerns about chronic disease, behavioral and mental health conditions, metabolic disorders, and cancer, have persisted and in some cases intensified. While health care access has improved in important ways for the County, at least partly attributed to a concerted focus on health care infrastructure, not all residents have benefitted equally. This illustrates that access and use of health and human services are greatly influenced by drivers of health and systemic inequities and these inequities need to be addressed. Inefficient uses of health care services are both magnified and mitigated by greater attention to upstream drivers of health, along with the social, economic, built, and natural environments. Further, optimizing health care service provision within and outside of traditional health care settings (e.g., reducing redundancy, ensuring care is provided in the setting that can provide services efficiently) will aid in balancing investments between health care services and other factors that influence health. What is clear from this assessment is that there is County interest to leverage *Health in All Policies*, and as such, this policy and community window for action should not be missed. This means deeper linking of health drivers to health outcomes comprehensively, in both County department planning and resource allocation, as well as in collaboration with nongovernmental organizations in the County.

Figure 9.1 briefly summarizes key findings from this assessment. The key findings from this report highlight the need to rebalance investments in health care and drivers of health to promote health and well-being and to address inequities in health and well-being. This is evidenced by inappropriate and inefficient use of EMS and EDs, and also by differential access and use of health care services by racial/ethnic groups and socioeconomic status. Additionally, findings highlight that health care use is expensive, and inappropriate use of services can signal broader health system problems that influence poor health and well-being outcomes. Noted challenges relating to accessing health and human services offer insight into why some residents may use EMS or ED services instead of primary care. Finally, our exploration of drivers of health within the County helps to illustrate clusters of inequities that may be driving poor health outcomes. As described in Figure 9.1, districts are differentially impacted by drivers of health and thus encounter different health challenges.

Figure 9.1.
Key Findings from this Assessment

Inefficient uses of the health care system remain despite improvements.

- One in four emergency calls for medical services were for nonurgent needs.
- EDs continue to be used for preventable issues, such as asthma and dental care.

Residents encounter challenges in navigating health and human services.

- There is a lack of health insurance for some groups, including noncitizen immigrants, and insufficient funding to support the needs of these groups.
- Shortages of dentists and primary care and behavioral health providers impact access, as does the cultural responsiveness and perceptions of cultural responsiveness of providers.
- Transportation barriers hinder residents obtaining health and human services.
- Residents are often unaware of available services and resources or may not know how to access or navigate known services and resources.

Low spending on health and human services.

- Estimated County spending on health and human services departments is \$39 per person, about one-third to one-seventh the per person spending of surrounding Maryland counties.

Inefficient health-services use is suggestive of reduced access to health and human services, which can contribute to inequities in health and well-being.

Systemic inequities in drivers of health place some communities farther behind in building healthy futures.

- District 2 has high rates of poverty, working poor, and uninsured. It has the highest rate of foreign-born residents in the County and numerous “hot spots” of noncitizen immigrants living in severely overcrowded and costly housing. Hispanic residents predominantly live in District 2, and their teen birth rate is more than double the County rate, their self-rated health is worse than other adults, and they are more likely to report having arthritis, cardiovascular disease, and diabetes.
- District 3 has the highest rates of working poor and poverty in the County and numerous community “hot spots” of low-income individuals with poor access to healthy food. Additionally, it has a designated primary care shortage area and the highest rates of hospitalizations for children in the County.
- District 5 is predominantly composed of Black residents and has higher than average rates of poverty and the publicly insured and uninsured. It also has the highest rates of ED visits and hospitalizations for mental and behavioral health and substance-related conditions for adults and its neighborhoods bordering DC have a high risk for potential exposure to lead.
- District 7 is predominantly composed of Black residents, has higher than average rates of poverty, the working poor and publicly insured, and has low rates of adults with above basic health literacy. Residents in District 7 have the highest rates of ED visits for adults and children in the County, including for conditions better managed in primary care settings, like diabetes, heart disease, and hypertension for adults and asthma for children.

Data Gaps and Limitations

In conducting our assessment, we reviewed existing studies on the health and human services needs of residents, carried out original analyses using data sources maintained by federal agencies and local departments, and sought input from relevant stakeholders. While thorough in approach, our ability to create a comprehensive picture of health and human needs in the County was limited by the availability of data. We briefly mentioned key gaps and opportunities by health outcome area or driver at the end of respective chapters. We describe the larger, cross-cutting limitations below.

Sub-county data. Prince George's County is large and diverse. Therefore, data available only at the County-level will not fully capture the experience of all residents. We used several data sources, including the ACS and a variety of geographic data sets to obtain sub-county information on demographics, socioeconomic, and features of the environment. However, we were unable to fully characterize health behaviors, access to care, and health outcomes at sub-county levels and for specific subpopulations. As such, a thorough analysis of health disparities and inequities was not possible.

Data on use of outpatient care. We did not analyze data on the use of outpatient care by Prince George's County residents. Such data come from a variety of sources, such as private health insurers, Medicaid, Medicare, and safety-net clinics in the County and in neighboring jurisdictions that treat County residents. The BRFSS provides self-reported information about use of medical care and dental care, but unfortunately more objective measures of health care utilization for County residents are not readily available. Several states maintain comprehensive All Payer Claims Databases, which facilitates this type of analysis. Moreover, our analyses of hospitalizations and ED discharges were conducted using data from Maryland and DC. This extends the findings of the 2019 CHNA, which used only Maryland data. Future CHNAs should include data from both DC and Virginia to better understand the needs of residents as well as to understand its contribution to health care delivery to Prince George's County residents.

Data on children's health. We were unable to identify a comprehensive population-based dataset describing the health and well-being of children in Prince George's County. Epidemiologic data sets, such as the BRFSS, contain data on adults aged 18 and older. We used the YRBS/YTS to obtain important information about mental health, obesity, health behaviors, and tobacco use among middle school and high school students, however, this survey does not include younger children and does not include information about health care use and health outcomes. Other data sources, like the National Survey of Children's Health, provide more information about adverse childhood experiences, health care use, and health outcomes but are unfortunately not generalizable at the county-level.

Limited data on specific health sub-domains. This report takes a holistic approach to health and human services needs in the County. As such, a broad array of upstream determinants and drivers of health were assessed for their relationship on health and well-being. Within each of these topical areas, many domains and measures were assessed, but not all contained relevant data for a deep dive. In our recommendations, we point to particular areas where relevant data gaps exist (e.g., oral health, unmet need, health care quality, and broader health and well-being) and discuss ways the County may consider addressing these gaps going forward. Further, as greater attention is given to the role of historical and systemic inequities in health, it is useful to consider how well data capture these structural barriers (e.g., discriminatory housing policies). These barriers are not consistently monitored or tracked.

Stakeholder engagement. We attempted to obtain feedback from a diverse and representative set of stakeholders through primary data collection via a town hall meeting, three geographically distributed adult focus groups, one adolescent and young adult focus group, and interviews with 23 organizations addressing the health and human services needs of County residents, including 15 government agencies and 8 nonprofit organizations serving County residents. However, some populations are notoriously hard-to-reach, even with the best efforts (e.g., individuals experiencing homelessness and undocumented immigrants) (see Appendix A for more details). Moreover, those individuals who attended focus groups and town hall meetings may represent more engaged residents who may or may not share the same opinions and beliefs as other residents who did not participate in these events. Finally, given scope and resources, these groups and interviews were conducted in English, though if a translator was needed, accommodations could be made. Therefore, our qualitative data must be considered a sample, and does not necessarily capture opinions from all relevant stakeholders.

First phase to inform policy development. This report represents a first, foundational step towards a more comprehensive County approach to *Health in All Policies*. As such, the report serves to integrate findings from prior reports with a holistic view of drivers of health and begins to examine integrated planning issues, such as where health services are being delivered and relative resource allocation. However, to fully build and sustain *Health in All Policies* requires a few phases of deep coding of County health expenditures combined with data on service and policy effectiveness, followed by policy development and implementation that purposefully navigates silos. As noted in Chapter Nine, this report does not assess health return on investment given that we do not yet have complete information on all health service effectiveness or impact. As such, this report should be viewed in this context.

Recommendations for Health in All Policies

Overview

The findings from this assessment offer many paths forward for Prince George's County, particularly as the County pursues a more integrated approach to influencing health and well-being outcomes. Below, we offer preliminary recommendations for the County to get started with *Health in All Policies*. Second, we provide comprehensive recommendations for implementing a comprehensive *Health in All Policies* approach. These recommendations, categorized as (1) creating a *Health in All Policies* system, (2) aligning investments, and (3) implementing new measurement and data systems, include attention to County-wide tools and potential legislative actions, and examples from other communities.

Recommendations for Getting Started with Health in All Policies

Building a *Health in All Policies* system, as outlined in the comprehensive recommendations presented below, does not happen in one step, but rather through many strategies and phases. In order to make progress, however, it is useful to consider a few first steps. In Figure 9.2, we present initial steps to consider. All of these steps require some amount of legislative action, but the first three are particularly key for legislative branch effort, while the last two can be advanced through County departments. Allocating funding to support these efforts is important to ensure staff time and resources are available to pursue this work.

Figure 9.2
Getting Started with *Health in All Policies*

√	<p>County Council acting as the Board of Health</p> <ul style="list-style-type: none"> ○ Require a more detailed County inventory (government and ideally, nongovernment) of the places and programs in which health services (e.g., health education, health promotion, clinical services) are being provided and who is receiving these services (in order to measure and reduce inequities). ○ Align information about what is being spent on these health services and information on reach, effectiveness, and impact overall on reducing inequities. ○ Require all nongovernmental organizations receiving County funding to identify their role(s) in promoting health and well-being and reducing inequities.
√	<p>County Departments within the Executive Branch</p> <ul style="list-style-type: none"> ○ Centralize data on drivers of health with information on health services and health outcomes, including requiring common reporting on drivers by each County agency. ○ Update the County website to coordinate information on what influences health across sectors. Offer resources organized by the health drivers to better support populations with health issues in more integrated ways (“one stop”).

Recommendations for Implementing a Comprehensive Health in All Policies Approach

We summarize our comprehensive recommendations in Figure 9.3, categorized as (1) create a *Health in All Policies* system, (2) align investments, and (3) implement new measurement and data systems. The aligning investment category (2) includes a nod to County investment decisions, particularly budget analysis. The measurement category (3) is intended to reflect on current data availability and limitations as well as to offer suggestions to the County in terms of what may be helpful for monitoring the health and human services ecosystem going forward. Where relevant and available, we provide examples from other communities. We note LB where legislative action is central, EB for executive branch leadership and EB and LB where coordination and collaboration across both is ideal.

Also note that a two-page summary of the report findings and recommendations is available in Appendix E.

Figure 9.3.
Recommendations for Implementing *Health in All Policies* Actions

1. Create a <i>Health in All Policies</i> system
1.1 Develop a coordinated <i>Health in All Policies</i> system that creates guidelines for governance (LB).
1.2 Create a strategic plan for all health and human services agencies (EB).
1.3 Implement policies that promote health equity, including design and economic environment decisions (LB).
1.4 Improve the delivery and coordination of health services, including better screening for social needs (EB).
1.5 Improve the accessibility, clarity and usability of health and human services promoting resources and related civic engagement opportunities among County residents (EB).
2. Align investments
2.1 Break down silos between funding streams for health and human services, particularly in ways that can better leverage and coordinate grant funding (LB).
2.2 Engage the nontraditional health sector (e.g., Schools, Fire/EMS, Police) to participate in “health mapping” and analysis (LB and EB).
2.3 Better coordinate the nongovernmental organizations that address health and human services needs in the County, and employ high capacity nonprofits strategically (EB and LB).
3. Implement new measurement and data systems
3.1 Identify data gaps and implement systems to address gaps (EB).
3.2 Improve structures that support health and well-being data transparency and stewardship (LB).

NOTES: The designations of LB (Legislative Branch) and EB (Executive Branch) denote where key leadership likely resides.

1. Create a *Health in All Policies* system

The recommendations described in this section are intended to offer an overarching approach to adopting a *Health in All Policies* strategy. These recommendations reflect the important ways that the County Board of Health and Executive Branch can work together to address drivers of health and health and well-being (as illustrated in the overarching framework for this report, Figure 1.3). As noted above, we use the acronyms LB and EB to help delineate primary roles for the County Board of Health (LB) versus activities of County departments (EB).

1.1 Develop a coordinated *Health in All Policies* system that creates guidelines for governance (LB)

One of the key issues, primarily raised by stakeholders but also observed through the study team’s review of various County reports and policies, relates to the challenge of how departments that serve residents’ health and human services needs are connected and coordinated, mainly in the area of structure and governance across the various sectors that contribute to health and

well-being outcomes. In order for *Health in All Policies* to most effectively work, there is often a structure that defines a shared set of health goals across departments, a clarity on how information is shared to achieve those goals, and accountability across departments on how health will be integrated in policy design and development. These governance guidelines can ensure a more coordinated approach to integrated planning for health and is fundamental when making decisions about health resource allocations as noted in Chapter Eight. In short, without such a system, it is difficult to align information and determine health return on investment. This kind of system also can be powerful in actively addressing historical and systemic barriers to health because those considerations can be part of the decision-making structure. Finally, a *Health in All Policies* system also can be accompanied by mission statements. These guidelines help to publicly clarify goals and outcomes of a holistic focus on health, County responsibilities, and even expectations for nongovernmental organizations working with County departments. This overarching structure could be documented in a *Health in All Policies* strategic plan, developed with support from the Executive Branch leadership and key agencies.

Examples from the Field: Designing Health in All Policies Systems

There are models to review from Maryland as well as outside the state. In Maryland, health and human services organizations look different depending on county. For instance, Anne Arundel County has a Health Department separate from aging services and social services. But communities outside of Maryland may provide another path for integrated health systems. Seattle & King County in Washington State provides an example of moving toward a more health and well-being focused system. In 2010, the Seattle & King County Council issued the “Fair and Just” Ordinance (#16948) to complement their 2010-2014 countywide strategic plan. The ordinance established key definitions and prioritized equity across 14 social determinants: economic development, community and public safety, fair justice system, early childhood development, high quality education, fair employment practices, supportive food systems, quality health and human services, healthy environments, safe and affordable housing, workforce development, strong neighborhoods, parks and natural resources, and equitable transportation (King County, 2013). The county agencies report to the Office of Performance, Strategy, and Budget, the body responsible for holding the county accountable for its proclaimed strategies. Additionally, in 2013, Seattle & King County developed the Health and Human Services Transformation Plan to shift the human services from *reactive* to *preventive* (King County, 2013). The County’s Department of Public Health and Department of Community and Human Services historically focused on treating the sick and caring for those under crisis; however, the 2013 transformation plan aimed to move department priorities to the prevention of disease and promotion of well-being.

Example from the Field: Health Promotion

In 2010, San Diego County started a similar approach via the *Live Well, San Diego* initiative to promote health and well-being, particularly among disadvantaged populations. The County’s framework covers four main themes: “building a better service delivery system, supporting healthy choices, pursuing policy and environmental changes, and changing the culture from within the organization to support positive health outcomes” (San Diego Association of Governments, 2018). San Diego allocated planning responsibilities to various parts of the county with subsequent roll-outs of the three primary phases: Building Better Health (2010), Living Safely (2012), and Thriving (2014) (Live Well San Diego, 2014). By the end of 2018, the county

had partnered with nearly 400 community partners across sectors each with a designated role in promoting *Live Well*: businesses, local municipalities, schools, community organizations, and faith-based organizations. *Live Well* as a county-wide initiative floods the residents with consistent health-related messaging and creates a shared agenda and vision for participating organizations. *Live Well* sponsors a series of sub-initiatives such as the Getting to Zero initiative, which implements routine HIV testing in localities. The Live Well San Diego Food System initiative leverages partner expertise to encourage the reduction of food waste (Live Well San Diego, 2018). The Safe Route to School Programs is a public campaign to encourage students to walk or bike to school, as well as a policy campaign to fund the construction of safer sidewalks and greenspace (San Diego Association of Governments, 2018).

1.2 Create a strategic plan for all health and human services agencies (EB)

While Prince George's County has a robust Community Health Needs Assessment led by the County Health Department, there is no such comparable assessment from Social Services or Family Services. Given the linkages in this report across the health and human services departments in influencing health and well-being outcomes, developing a comparable assessment and strategic plan for those departments, which can be used to organize investments, data, and programmatic decisions across health and human services, is important. This is essential for the activities of traditional health and human services to avoid duplication, minimize gaps in services, but also is key as the County moves towards stronger *Health in All Policies* actions that bring in departments beyond health and human services, such as Police, Corrections and Fire/EMS, all departments that now must respond to residents' behavioral health needs.

Example from the Field: Health and Human Service Integration

Montgomery County, Maryland offers an example for enhancing the integration of health and human services. In the 1990s, Montgomery County merged four county departments: Social Services, Public Health, Family Resources and Addictions, and Victims and Mental Health Services. The individual departments were facing increasing demand with a significant increase in caseload volume, over 32,500 uninsured adults, children, and pregnant women, and poverty on the rise across the county. Departmental leaders recognized overlapping need and, consequently, the need for coordinated service delivery. Complete coordination was not immediate but required a deliberate strategic plan. For the first decade of merged operation, the merger was mostly a physical and procedural unification. Staff worked at a co-location and under the same departmental human resources unit; their day-to-day operations were primarily still siloed. By 2007, the practice of integration began to be incorporated into operations. The department created a practice model, aligned the policy environment, and offered training for staff members. Around then, the department additionally developed a technology modernization approach which aided data-supported decision-making and streamlined client files. It took until 2016 for the merged department to function as a fully integrated and interoperable organization. Technological tools improved customer experience by eliminating duplicitous service delivery requiring clients to retell their story numerous times. Disparate client files were linked across services into one electronic file, which eliminated dual data entry processes, as well as allowed staff to better allocate resources based on client need and capacity. One electronic file allowed staff to holistically view their clients and appropriately refer them to resources throughout the entire organization (Hencoski et al., 2017).

1.3 Implement policies that promote health equity, including design and economic environment decisions (LB)

Both the quantitative data and stakeholder discussions highlighted concerns related to the design of the physical and built environment, including transportation as an access barrier to health promoting resources and health care services. Some of these barriers are built into longstanding historical and systemic inequities. Some of these topics were covered in Prince George's County approved general plan, *Plan 2035*. Released in 2014, this plan outlines several strategies that align development plans with broader goals of community health and well-being as discussed in this report, including increasing transportation access, enhancing walkability of strategic neighborhoods, preserving the natural environment, and integrating community health into the development review process (Prince George's County Planning Department, 2014). Across these topics, stakeholders recommended policies connected to

- Enhancing walkability and environmentally friendly communities;
- Implementing health equity guidelines with new economic investment; and
- Harnessing whole community approaches to place-based investment.

Enhancing walkability and environmentally friendly communities. In the area of walkability and community design, there are several strategies that may be useful for the County to consider. One idea that is part of current discussions and relevant for future planning is the idea of the “20-minute neighborhood,” or the strategy that residents can obtain all of the services in their neighborhood that they need without a car in just twenty minutes. Adding to that notion is the idea that all services would be health-promoting, rather than health-detracting amenities (e.g., outlets serve healthy foods). Many communities across the country are employing these strategies in master plans and community design strategies. Community design strategies refer to efforts to foster connections between people and places within the built and natural environments. In Portland, Oregon, the city has linked its Climate Action Plan to this concept. Through mapping and other spatial analytics, the city is taking into account commercial services, sidewalk placement, street connectivity, and topography to ensure that 90 percent of Portland meets this “20 minute” standard by the year 2030 (City of Portland, 2019). Important to note is that these approaches can be implemented differently in rural and urban communities. While “20-minute neighborhoods” may be welcomed in denser parts of the County, other strategies are likely to be more appropriate in the more rural parts of the County.

Example from the Field: Community Design

Under the encouragement from their *Health in All Policies* Task Force, the Vermont Department of Health produced a guide to help towns design health communities. The guide was intended to boost local ownership over the health of their communities. Several communities in Vermont, both local and regional, have developed plans of their own based on the recommendations. For example, Chittenden County created the ECOS Plan (Environment. Community. Opportunity. Sustainability.), which integrates health concepts throughout policy areas, including mixed use development, parks and recreation, biking, walking, and local cuisine. Another example is the Better Connections Program, which coordinates state and local funding sources to increase transportation options. Local municipalities in Vermont are encouraged to use funds to maximize land use by strategically planning transportation. Such decision making ultimately builds community resilience and spurs economic development (Vermont Agency of Transportation, 2019).

Implementing health equity guidelines with new economic investment. County stakeholders also raised concerns regarding economic investment and its associated impacts on health equity. In short, County residents and other leaders welcomed new investment but were concerned about the influence such choices had in either promoting or further worsening issues of health inequity in the County. This topic has been of high interest in the County, as evidenced by the November 2018 forum hosted by Health Equity Workgroup, which brought together community partners to discuss why equity matters and the opportunities and challenges for moving forward to achieve it (Prince George’s Healthcare Action Coalition, 2018). The County has an opportunity to build upon the momentum of the Health Equity Workgroup, by recognizing the linkages between history, systems, the built environment and health disparities highlighted in this report and by incorporating equity principles into decision-making for urban design going forward.

Example from the Field: Equity Lens

There are examples of communities using equity lenses on every community investment choice. For instance, Tacoma, Washington uses a Health Lens Analysis Tool to evaluate policies under consideration. The city established the Office of Equity and Human Rights at the city, and the Department of Health Equity at Tacoma-Pierce County Health Department, both of which a mission-central commitment to promoting equity. Multnomah County, Oregon, developed the Equity and Empowerment Lens, a tool to ensure policies, programs, and processes are equitable for all populations within the communities (Multnomah County Health Department, 2012). The Lens can be used to “redress institutional racism and create more equitable conditions” within a county department, as well as the externally facing policies affecting constituents (Bhat et al., 2014). To institutionalize the tool, the county established the Office of Diversity and Equity in 2012. The awareness and integration of equity issues is a county priority and ultimately led to the expansion of the Healthy Birth Initiative, which additionally addresses maternal health in the Black community. The program partners with key stakeholders including participants, community organizations, social services, and health care providers to enhance healthy pregnancies and childbirth outcomes. The program was informed by the Lens to have a culturally specific approach “that reflects the needs and experiences of Black women and families” (American Public Health Association, 2015).

Harnessing whole community approaches to place-based investment. Given the role that non-governmental organizations play in health and well-being in the County, it is important to note that these organizations can serve as powerful anchor institutions in communities, shaping health priorities and influencing health outcomes. Some stakeholders suggested that part of institutionalizing the role of these organizations in the County’s *Health in All Policies* strategy is to provide incentives for anchor institutions to adopt or normalize practice in social accountability and community investing, through strategies like place-based impact investing and related approaches (Democracy Collaborative, 2019). These anchor institutions can make financial and other commitments to improve the surrounding neighborhoods in which they are located.

Example from the Field: Neighborhood Funds

In 2016, the City of Detroit launched the Strategic Neighborhood Fund (SNF) to promote neighborhood revitalization and improve walkability. The public-private partnership, between the City of Detroit, Invest Detroit, neighborhood residents, and corporate donors, pools funds for park improvements, streetscape improvements, commercial corridor development, and affordable single-family home stabilization (Invest Detroit, 2019b). The initiative emphasizes the use of resident input before each project kicks off via 28-member representative steering committees comprised of neighbors, students, community nonprofits, and businesses. Neighborhoods are designated for development by neighborhood density, strong local leadership, proximity to historic corridors, and other neighborhood assets. While the initial iteration of SNF piloted three neighborhoods for revitalization, SNF 2.0, launched in the second quarter of 2017 by Mayor Mike Duggan, expands the projects to seven neighborhoods, vastly increasing the need for funding and philanthropic ventures (Invest Detroit, 2019a). The capital expansion will spur increased connectivity of neighborhoods via parks and an increase in viable single family homes, which is also supported by the Affordable Housing Leverage Fund (AHLF). AHLF is managed by the Local Initiatives Support Corporation which allocates funding for local developers who apply. SNF and AHLF are expected to continue developing Detroit's neighborhoods through 2024 (Invest Detroit, 2019b).

SNF 2.0 utilizes the proven effective tools of participatory decision-making and pooled finances to re-develop seven additional neighborhoods in Detroit. The second iteration acknowledges the role of health and human services, education, and workforce development in the revitalization of Detroit's neighborhoods. The City partners with the University of Michigan Poverty Solutions Lab to assist in teen pregnancy prevention through increased clinician engagement, the expansion of the gun violence reduction program Operation Ceasefire Detroit, and the creation of lead abatement programs. Another pilot program will establish a bus loop to connect students between home, school, and after-school options (Invest Detroit, 2019a). While health is not a primary focus of SNF, the recognition of the aforementioned areas of education and human services is a step forward.

1.4. Improve the delivery and coordination of health services, including better screening for social needs (EB)

There was general agreement across stakeholders and in our data that while there are efforts to coordinate some health services, there is a need to do more, including helping residents access services, particularly within underserved populations and for mental and behavioral health needs. Further, it was noted that expanded screening is essential, but that funding to support the delivery of needed services is needed. In particular, stakeholders noted that there is insufficient funding to support populations that do not qualify for government health insurance programs.

In the area of **access to health care services**, large racial/ethnic disparities were observed. This was noted in terms of low utilization of prenatal care among Black mothers, which is highly concerning given the high rates of infant mortality observed in this population. Additionally, Black adults had high rates of ED use for preventable dental conditions, suggesting that many lack a usual dental provider. Stakeholders did offer recommendations on improving access, including the broad suggestion for reducing transportation barriers, such as the idea of a specific bus route focused on transporting residents to health care services. Notably, accessibility was a key component in selection of the location of the currently under construction University of Maryland Capital Region Medical Center, which will be accessible via I-495 (the Capital Beltway highway) and walkable to a metro station.

In the area of **mental and behavioral health**, which is a health issue identified through both quantitative and qualitative analyses, there were several strategies offered for improving access to services. Some stakeholders argued for a “mental health campus” that could offer inpatient and outpatient services and be inclusive of all ages including geriatrics, children and adults (e.g., similar to Virginia’s Inova model). This may include a freestanding mental health clinic that allows observation for up to 24 hours if needed in, as well as walk-in services. In addition to the brick and mortar mental health and behavioral health services, recommendations were offered regarding augmenting telemental health, especially for underserved areas, such as District Heights, or for individuals that may feel uncomfortable seeking care in person due to stigma. There was particular interest in enhancing mental health services, such as ACT teams noted earlier, for returning citizens. Another suggestion included designing subspaces in nursing homes to support the mental and behavioral health needs of seniors.

There was widespread recognition of the relationship between health and social determinants and many stakeholders expressed an interest in **social needs screening**, including improving how needs are assessed and addressed both in clinical and other service settings. Given earlier findings about the need to connect primary care with related support services as well as the interest in holistic health provision, this recommendation is particularly salient. There are examples from other regions that may be useful for Prince George’s County.

Example from the Field: Promoting Coordination via Data Integration

Seattle & King County in Washington State has a data aggregation project that matches an individual’s demographic information and service utilization history between multiple human service systems such as Medicaid, behavioral health, jail/corrections, services for people experiencing homelessness, emergency medical services, and therapeutic courts. The state uses its longitudinal web-based Predictive Risk Intelligence System (PRISM) to identify high-risk Medicaid patients. The data tool conglomerates medical, mental and behavioral health, social service, and health assessment to provide clinical decisionmakers with a holistic view of a patient’s risk factors, health outcomes, and service utilization. The integrated data and subsequent risk algorithms are used to predict patients with potentially high medical costs in the future, their likelihood of avoidable emergency room visits, and their most likely primary care provider (Washington State Department of Health and Human Services, 2014). Further, the conglomerated data identifies individuals for the Familiar Faces initiative. The Familiar Faces program identifies individuals who are frequently jailed and have mental health or substance abuse issues and then provides comprehensive rehabilitative services which pair behavioral health, primary care, and life skills training into one service delivery (King County, 2019). Rather than view these high utilizers from a criminal justice perspective, the system was instead redesigned to activate a health and human services response. In a similar data project, the Office of Performance, Strategy, and Budget of Seattle & King County developed an assessment system, which compiles a set of key metrics to track the previously identified social determinants and areas of inequity (Eyler et al., 2019). The project is funded by a RWJF Data Across Sectors for Health (DASH) grant to integrate affordable housing and health data and can be layered with data on chronic disease to help guide policymakers in resource allocation (DASH Connect, 2019; Eyler et al., 2019).

1.5. Improve the accessibility, clarity and usability of health and human service promoting resources and related civic engagement opportunities among County residents (EB)

With only 52 percent of County residents having above average health literacy, combined with stakeholders noting residents' confusion and lack of knowledge about County resources related to health, health care access and use, and human services access and use, the County has the opportunity to strengthen its outreach and communication efforts.

Stakeholders offered recommendations in a few areas. First, there was interest in helping **residents to manage their health**, particularly complex health needs, better. This includes programs that can explain health promoting factors, help individuals navigate health and social services, and help residents understand health insurance and related social programs better. Some stakeholders argued for more community health navigators in nontraditional health settings, such as placing navigators at the Department of Motor Vehicles or the Department of Parks and Recreation.

Stakeholders, including youth residents, asked for more support to **link education and job training with skills building in health literacy** and related areas of financial and civic literacy. Some stakeholders even argued for the establishment of a youth council in the County that would have input on *Health in All Policies* and serve to improve youth outreach and education on health matters.

There were concerns that the County **resources for residents related to health and human services** were not easily understood or navigable. For instance, some stakeholders suggested improvements in the County website, to actively link residents to health promoting programs and resources perhaps mapping against a personalized need or interest profile. Residents, in particular, noted that there are good County programs and resources. However, the way that the information is presented and shared suggested that County agencies did not coordinate with each other within and across these programs in ways that could be easily understood and managed by residents. There was also interest in greater use of multiple communication platforms, including augmenting the use of social media-based outreach.

Finally, there was interest in augmenting opportunities for **volunteering and other civic engagement**. As noted in Chapter Three, some residents were concerned that the county-wide volunteer program had been disbanded or at least weakened and suggested that relaunching or reinvigorating such a program could help bring more individuals, particularly youth and seniors, into providing services that support and promote health and well-being. There was also interest raised about helping the most vulnerable communities in the County engage civically, not only bringing these residents into volunteer activities but also helping them to participate in County Council discussions and effectively advocate for health improvements. Finally, residents noted that in order to promote a “wellness culture” of health, the county should seek input from residents when they access services to better understand social needs.

Examples from the Field: Community Resource Guides

Comprehensive community resource guides can help residents to better understand available resources. Having a single document that is updated annually may make it easier for residents to learn about resources available and how to access them. Examples of guides include the annual community resource guide (www.fauquierresources.com) from The Partnership for Community Resources on behalf of Fauquier County, Virginia develops an annual). The guide is available online and printed and includes a comprehensive and easy-to-read list of health and human services resources from all sectors such as mental health counseling, nursing

and rehabilitation facilities, private care providers, helplines, legal and court services, domestic violence assistance, low income housing, and utility assistance (Partnership for Community Resources, 2019). Additionally, Orange County in North Carolina publishes a comprehensive resource guide annually tailored for senior citizens. The guide details resources regarding assisted living, caregiver respite, enrichment opportunities, and other needs specific to an aging population (Orange County Department on Aging, 2020).

Examples from the Field: Improving Health Literacy

In considering how to address these issues, the County can learn from efforts intended to improve health literacy. First, the Health Literacy Data Map is a free online tool (<http://healthliteracymap.unc.edu>) that enables quick and easier monitoring of health literacy levels at the sub-County level. Additionally, efforts to improve health literacy are, according to the Agency for Healthcare Research and Quality, intended to “make it easier for people to navigate, understand, and use information and services to take care of their health.” In considering how to deploy these efforts in an organizational capacity, the County can learn from a paper published from the National Academy of Medicine titled “Ten Attributes of Health Literate Health Care Organizations” (Brach et al., 2012). Key attributes that are relevant for the County to consider with the goal of strengthening its outreach and communication efforts include

- Has leadership that makes health literacy integral to its mission, structure, and operations
- Integrates health literacy into planning, evaluation measures, patient safety, and quality improvement
- Prepares the workforce to be health literate and monitors progress
- Meets the needs of populations with a range of health literacy skills while avoiding stigmatization
- Provides easy access to health information and services and navigation assistance
- Designs and distributes print, audiovisual, and social media content that is easy to understand and act on.

Furthermore, the Horowitz Center for Health Literacy at the University of Maryland School of Public Health is developing a framework for “community health literacy” (Horowitz Center for Health Literacy, 2019a). This framework emphasizes the variety of sources of and channels for information and communication within a community by illustrating the interconnectedness of people and organizations. As noted by the Horowitz Center, “A community approach to health literacy considers all the places and methods where residents look for and exchange information, as well as how easy or difficult it is for them” (Horowitz Center for Health Literacy, 2019a).

Beyond health literacy, local governments are increasingly using multiple channels of communication to improve residents’ knowledge of and use of services.

Example from the Field: Connecting Neighborhoods

Nextdoor, the social networking online application (app) for neighborhoods, is an increasingly popular method for government officials to engage with residents. The app is bidirectional in that residents can post about issues of community interest (e.g., crime incidences, furniture for sale, restaurant recommendations, lost pets, etc.), and government agencies can post commu-

nity notices. *Nextdoor* offers polling capabilities, and when Gilbert, Arizona was considering changing the days for trash collection services, they administered an online poll using the app and obtained input from nearly 700 residents (Bloomberg Cities, 2018). Additionally, using a variety of communication channels offers residents multiple points of points.

2. *Align Investments*

A second category for implementation of *Health in All Policies*, is aligning investments for health. Our analysis revealed a chief concern is there is not enough funding for comprehensive health approaches and there is not clarity on what is being spent on health across County departments (see also Chapter Eight).

2.1 Break down silos between funding streams for health and human services, particularly in ways that can better leverage and coordinate grant funding (LB)

Stakeholders expressed concern that the total investments directed to health and human services in the County is low. This is first relevant in the health and human services part of County government, inclusive of the Health Department, Department of Social Services, and Department of Family Services. Further, this is a challenge to broader *Health in All Policies* budgeting. Stakeholders also questioned the stability and relative balance of general fund and grant dollars, including if and how the County can access more grant dollars and if that is viable for sustained health funding.

As noted in Chapter Eight focused on County budgets, it is useful to consider the relative breakdown of grant versus general funds. That analysis raised questions about the stability and integration of health funding. Since many government agencies and nonprofits are dependent on external grant funding, they are restricted in exploring innovative approaches to improving human service needs that are outside the scope of such funding. As described earlier, Prince George's County along with Baltimore County have health and human service departments that are majority grant funded, but Prince George's County relative to Howard, Montgomery, Anne Arundel, and Baltimore Counties in Maryland has the lowest general fund approved health spending, as of FY2018.

Trying to fund initiatives that encourage innovation or advance a *Health in All Policies* approach may be difficult with some **grant restrictions**. As noted in Chapter Eight, grants are time-limited and the efforts they supported may cease when the grant ends if they are not supported by other funding streams. Stakeholders noted that grants may not fund supportive services that are needed to promote a program, such as marketing and administrative costs. Concerns about lack of budget for marketing should be highlighted as many stakeholders noted that communication about available services and how to access them were ongoing challenges in the County. Further, nonprofits face additional barriers to funding. Since many nonprofits address a number of human services needs that support County residents, some stakeholders noted that they would benefit from more funding support from county agencies. Alternatively, support with office space from the County would also help these nonprofits to provide services.

Example from the Field: Leveraging Grant Funds

Allegheny County in Pennsylvania regularly leverages grant funds from multiple sources to coordinate resources across government jurisdictions. The County established the Public Health Improvement Fund, which blends finances from five local foundations and is operated by the Pittsburgh Foundation. This blended finance approach combines public and private funding in order to more effectively use resources for development. This approach enables

more flexible use of dollars, allowing them to be allocated to programs as needed (McGinnis, Crawford, & Somers, 2014). Funds were initially used to invest in short-term internal infrastructure development. Since its establishment, the fund has transitioned to supporting health assessments, developing the Allegheny health improvement plan, and acquiring accreditation (Hacker, Monroe, & Yonas, 2017). Under the grant funds from the RWJF's Bridging for Health initiative, the county is further exploring the use of a wellness trust, another funding pool specifically intended to support prevention and wellness interventions.

Example from the Field: Pooling Funds

The state of Virginia has nearly 30 years of experience blending finances for children and youth services. Passed in 1993 by the Virginia legislature, the “Children’s Services Act for At Risk Youth and Families” pools eight funds for services for at-risk youth (Stafford County, 2019). The funds include those from the Departments of Social Services, Juvenile Justice, Education and Mental Health. Localities’ matching funds were also incorporated in the early 2000s. While supervised by the state, the pooled funding is divested to local communities and managed by Family Assessment Planning Teams (FAPT), which are appointed by the localities. The teams convene local and state agencies, families, and service providers to coordinate health and human services for a child (City of Virginia Beach, 2019). Aligning health and social services pivoted the system away from silos and fragmentation, ultimately streamlining referrals and support for vulnerable families. Having an assigned FAPT member to each case allows for a tailored approach to care and service, as well as saves the locality money by ensuring services are not duplicative (City of Virginia Beach, 2019).

Example from the Field: Well-Being Trust Fund

Massachusetts established a trust fund focused on well-being. The state recognized the need to establish an alternative approach to supporting public health activities and ultimately saw disease prevention as a possible lever for cost savings. In 2012, Massachusetts passed a cost containment bill titled, “Act Improving the Quality of Health Care and Reducing Costs through Increased Transparency, Efficiency and Innovation.” Notably, the bill was the first of its kind to explicitly acknowledge the importance of wellness promotion and disease prevention. The bill instituted the Massachusetts Prevention and Wellness Trust Fund, which was a four-year \$60 million commitment to public health activities within the state. Over 15 years, lawmakers hoped to save over \$200 million in the process of joining health care investments to growth in the economy (Urban Health Research and Practice, 2013). The savings will be re-invested into community-level grants for prevention activities and initiatives (McGinnis et al., 2014). Northeastern University’s Institute on Urban Health Research and Practice highlighted three points of differentiation from traditional prevention budgeting efforts. Firstly, the fund does not require annual approval through the appropriations committee and instead is a four-year commitment. Second, large hospitals and insurers are the funding source for the fund, rather than relying on taxpayer revenue. Lastly, the fund recognizes the importance of non-clinical settings in wellness, including neighborhoods and workplaces (Urban Health Research and Practice, 2013).

Example from the Field: Tax Levies

The Florida state legislature authorizes counties to levy a tax specifically for programs supporting children and families. Voters can approve the establishment of a Children’s Service Council (CSC), which serves both as an account dedicated to children’s services as well as

a centralized entity for child advocacy partners and regulatory duties (Trust for America's Health, 2018). The CSCs are unique because the communities have the power to establish, by vote, a special district with taxing authority. The council's sole responsibility is to look after the children within its jurisdiction through leadership and oversight. Such an approach to child welfare and well-being financing potentially eliminates territorialism, or "turfism," to more efficiently allocate resources (Palm Beach County, 2019).

2.2 Engage the nontraditional health sector to participate in "health mapping" and analysis (LB and EB)

Prince George's County has created excellent tools and resources, including the Community Health Needs assessment led by the County Health Department. To move toward a full *Health in All Policies* approach that links sectors and data systems that inform and influence health and well-being outcomes, greater attention must be paid to how sectors outside the Health Department and related human service agencies (Family Services, Social Services) are contributing to health outcomes, such as PGCPs, Police, Corrections, Fire/EMS among others. This mapping is particularly timely given recent calls to refocus on the health actions of agencies outside of the nontraditional health sector (e.g., police and mental health). This effort can aid in combining information on health and human services; connecting across built, social, and natural environment drivers and health; and organizing budgets against common health frameworks. For example, "health mapping" is an approach that can include coding all department budgets for those programs that influence health outcomes or have health as part of an objective or mission, in order to capture a true accounting of health spending. As noted earlier, this approach has been used for federal coding of *Health in All Policies* (www.cultureofhealth.org) and can be used at the County level. This health mapping could be required by the County Board of Health before each department submits budgets.

As noted earlier, the County puts forth its actual and anticipated budgets by department each year. These reports include important performance metrics, such as clients served, and some outcomes, such as change in percentage of the population in foster care placement. However, the information is siloed and does not currently reflect a *Health in All Policies* budget. For example, the human services budget (health, social services, and family services) are not tracked together, despite evidence that addressing human service needs, like housing, improves health, and despite interest from County stakeholders to have a holistic health operating picture. Without treating health budgets together, it is unclear if the relative balance of funding across health, social services, and family services is appropriately aligned against actual health needs in the County. Furthermore, outside of the human services agencies, it is challenging to consider the impact of many drivers of health (e.g., transportation, housing and community development) from Figure 1.3, without putting the budget dollars together, showing the programs receiving funding/investment, and then aligning performance and impact measures. As noted in Chapter Eight in Figure 8.7, the vast majority of total funds are allocated to the Police and Fire/EMS Departments, while the human services agencies have much lower overall budgets.

Further, with the current way budgets are organized, County planners cannot easily examine primary and secondary outcomes of programs (e.g., homelessness management information system, home visiting) to determine dual benefits for health outcomes or interdependencies to address drivers of health and service needs together. This type of alignment can help with better approaches to blended or braided funding, referenced earlier, as well as identify

efficiencies and gaps for particular populations. For example, family health services in the Health Department budget should not necessarily be viewed separately from other family supports budgeted by the Department of Family Services and the Department of Social Services (Figure 8.3). Finally, it can also be difficult to apply health equity lenses to County investments without more aligned and holistic health and well-being budgeting. Again, taking the budgets and coding by topical categories side by side in Human Services could be useful.

In Appendix D, we offer a four-step process with draft templates that could be used to support pursuing integrated *Health in All Policies*/global health budgeting. The four-step process includes: (1) mapping current investments against health outcomes or goals of interest; (2) mapping health outcomes or goals for programs that *could* support the outcome in the future, within consideration of funding needs; (3) rating of programs and policies most critical for addressing the health outcomes or goals; and (4) using the aforementioned information to budget for the health outcomes or goals.

Examples from the Field: Health Impact Assessments

Although Prince George's County engages in health impact assessments, stakeholders noted that these efforts were not resourced or occurred too late to have a meaningful impact. There are examples of this integration of health information and requirements to pursue health assessments outside of the traditional health sector. For instance, the Massachusetts Tobacco Cessation and Prevention Program offers an example for applying a framework of prevention to other areas of chronic disease. The program, run by the Department of Public Health, understood widespread disease prevention as a combination of policy, systems, and environmental change. In 2009, Massachusetts passed the Transportation Reform Bill, under which the Healthy Transportation Compact was formed. The goal of the compact is to “balance all transportation modes, expand mobility, improve health, support a cleaner environment, and create stronger communities.” The compact mandates that health impact assessments be conducted for every transportation project, thus engaging agency officials from MassDOT, health and human services, energy and environment, and public health. Health impact assessments were used in the implementation of complete streets, the expansion of safe routes to school programs, and the execution of partnerships to support efficient transportation (Massachusetts Department of Transportation, 2011). In 2014, Massachusetts formalized the compact by establishing a complementary advisory council (Miller, 2016).

In Vermont, the governor issued an executive order in 2015 to create an interagency *Health in All Policies* Task Force. The task force, comprised of representatives from all agencies, was tasked with prioritizing the direction of policies and investments for the health of Vermonters. The group initially conducted a series of HIAs, which were then used to develop policy recommendations for non-health areas such as transportation, housing, and education (Vermont Department of Health, 2018a). Some examples of past HIAs include regulation of recreational marijuana, paid sick leave policy, and school transportation policy. The HIAs were used to guide policy in conjunction with Total Health Expenditure Analyses (THEA). The analyses capture non-health spending for activities that have a strong influence on health. The analyses help to prioritize future investments. For example, the 3-4-50 Initiative aims to raise awareness about how three health behaviors (poor nutrition, lack of physical activity, and tobacco use) lead to four major chronic diseases that result in death for more than 50 percent of the Vermont population. THEA served as a catalyst for investments related to the initiative such as expanding greenspace and developing more smoke-free sites. The *Health in All Policies*

Task Force has been in the process of creating a dashboard of performance metrics to track related progress. As of 2019, the dashboard is not publicly available (Klein & Levine, 2018).

2.3 Better coordinate the nongovernmental organizations that address health and human service needs in the County and employ high capacity nonprofits strategically (EB and LB)

A number of nongovernmental organizations, particularly nonprofits, partner closely with County agencies to provide human service needs. Despite this, many stakeholders noted that it can be difficult to bring government agencies and nonprofits together for planning due to multiple competing priorities as well as time and funding restraints. Across County agencies, there is much interest in *Health in All Policies*. This includes activities conducted by the Prince George's Healthcare Action Coalition Health Equity Workgroup, which has helped make this approach more visible to County leaders. Stakeholders noted that the Health Equity Workgroup, which includes members from the numerous County agencies and nonprofit members, is taking a leadership position in promoting collaboration between agencies and nonprofits in advancing *Health in All Policies*. Many nonprofit members in the Health Equity Workgroup are leading smaller projects that the county can build upon to advance *Health in All Policies*. County departments working with nongovernmental organizations should organize and publish that information for better cross-department coordination. Relatedly, the County Board of Health could require that all organizations receiving county funds report common data that can be used for County health planning.

One stakeholder noted that nonprofits have the capacity to offer even more support for county agencies in the provision of service needs if given the opportunity. It was noted in some jurisdictions, nonprofits take a much greater role in service provision allowing services to be decentralized and provided to a more diverse group of residents. Although nonprofit organizations may apply for grants as partners with agencies, often these organizations only get a small percentage of such funding, with the majority going to the County. Several County department stakeholders noted that they welcome partnerships from nonprofits and would like to transfer some services to community-based organizations. However, because many nonprofits are small or may be currently in limited operation, there is concern that many lack capacity to provide the services currently provided by agencies. To address these challenges, some stakeholders suggested employing dedicating grant writing staff at each department to identify and apply for funding for initiatives that promote *Health in All Policies* with nonprofits. Given the broader issue of both coordination and nonprofit capacity building, a few examples from other regions may be worth noting.

Examples from the Field: Health Partnerships

In Massachusetts, there has been a significant focus on promoting statewide public-private partnerships for health. In 2009, the Department of Public Health launched *Mass in Motion*, an initiative designed to promote healthy eating and exercise within the state, as instructed by Executive Order 509 (Commonwealth of Massachusetts, 2009). The initiative awards community-based grants to local municipalities to construct policies and programs to encourage healthier lifestyles through increasing access to local fresh foods, building open spaces, and creating safe neighborhoods (Commonwealth of Massachusetts, 2019). Communities employ various strategies such as active design standards, age-friendly communities, food zoning, and community joint use agreements, which aids in cost savings by sharing spaces and programs

between public and private entities. One particular strategy of note is the Health Incentives Program (HIP) for social services clients. SNAP households are automatically enrolled in HIP. For each dollar spent on fruits and vegetables using SNAP benefits, the beneficiary receives \$1 back up to a specified limit from eligible vendors. The program encourages households to maximize their dollars spent and ultimately supports healthy nutrition habits (Massachusetts Department of Transitional Assistance, 2019).

Allegheny County is working to harness community capabilities by engaging partners and stakeholders already existing in the community, rather than re-invent programs. This effort is highly relevant to Prince George's County given that the County has numerous non-governmental organizations but that many of these organizations are often too small to support ongoing and large-scale efforts. Launched in 2014, Live Well Allegheny is an initiative designed to promote physical health, as well as “mental wellness, personal and community safety, preparedness, well-being, quality of life, education, and health literacy” (Live Well Allegheny, 2019). To address food equity issues and increase physical activity, the county's health department partnered with the Greater Pittsburgh Community Food Bank, Just Harvest, United Way's fitUnited, Allegheny County Economic Development, and RAND. The multi-stakeholder strategic partnership coordinates programmatic efforts and tracks indicators such as grocery store developments and supplemental nutrition assistance use. Allegheny County additionally partners with community organizations to promote public safety and wellbeing of residents. Covering a wide range of health concerns, the Safe and Healthy Communities initiatives aims to increase access to healthy foods and transportation and support programs for traumatic brain injury, abuse prevention, motor vehicle safety, and falls prevention. Another partnership with Tobacco Free Allegheny conducts a week-long campaign to help residents quit using tobacco products. The programs focus on educating and communicating smokers to encourage them to commit to quitting (Live Well Allegheny, 2019).

3. Implement new measurement and data systems

Ongoing and robust monitoring and tracking is essential to data-driven decision-making, and for a County interested in integrating health information in ways that are informative about holistic health and well-being, the choice of measures and what is analyzed is critical. These efforts, in particular, require financial investment to ensure staff and resources are available to sustain this work. These efforts can support analyses of current and potential future investment decisions. Framing measurement against our framework for health and well-being (Figure 1.3) can be useful for the County going forward.

3.1 Identify data gaps and implement systems to address gaps (EB)

Since RAND's last health assessment for the County was conducted in 2009, data systems have evolved greatly. More data are available, it is more accessible, and it is available at more granular levels. This is well-illustrated by the Health Department's PGC Health Zone website (<http://www.pgchealthzone.org>), which offers numerous indicators describing resident's health, health care access, education, and poverty status among others. However, limitations to tracking comprehensive health and well-being in the County exist, some of which were briefly noted in prior chapters. The key areas include: limited data available for sub-County, neighborhood level analyses; limited information about broader health and well-being, particularly with respect to health equity, and challenges integrating data across county departments.

As documented throughout this report, Prince George's County is diverse, and residents have different experiences in accessing health and human services. Thus, data available only at the county-level will mask the experiences of some residents. While data sources like the ACS provide rich sub-county information about demographics, socioeconomic status, and health insurance, it is more challenging, and often impossible, to find existing sub-county information about residents' health behaviors, access to health care, use of preventive health care services, and health outcomes. The BRFSS and YRBS are surveys that provide county-level information on a range of health behaviors, access to health care, use of preventive services, and self-reported health. Availability of these measures at a sub-county level would enable the County to identify neighborhood challenges and successes related to health and well-being. To obtain richer sub-county information about these indicators, Prince George's County could field a similar instrument on their own or offer to pay the state for oversampling of County residents and the additional technical expertise needed to produce these small area estimates. This is a strategy pursued in California, where the state fields the California Health Interview Survey and counties are able to pay for oversampling to obtain sub-county estimates.

While we captured many of the upstream determinants of health and well-being in this report, many of which are key factors in health equity, more information on these structural and systemic drivers is needed. For instance, it would be useful for the County to track factors such as access to economic opportunity, access to justice, and fair housing policy with traditional health data.

Further, there is limited information available about the oral health and dental care needs of County residents. While county-level information can be obtained from the BRFSS, given the high dental care needs we uncovered in analysis of ED data, particularly for Black adults, the County should consider additional strategies for collecting this information. Continued tracking of use of EDs for non-traumatic dental care may be one strategy to pursue (and is a measure featured on the PGC Health Zone website). Future strategies may include school-based oral health surveillance efforts, like those that are implemented in North Carolina and Virginia.

Also, data were limited in information that offer insight about broader health and well-being. Stakeholders noted health literacy as a concern in the community, and while we were able to examine variation in levels of health literacy across the County using a modeling approach, a more thorough assessment of this would be able to track trends overtime and understand the drivers of health literacy, which may vary across neighborhoods. The University of Maryland's Horowitz Center for Health Literacy offers tools for assessing and for improving health literacy (Horowitz Center for Health Literacy, 2019b). Additionally, stakeholders indicated the need for providers of health care and social services to offer culturally competent care. We were unable to examine this using existing data sources. Further efforts to study this in the County could utilize existing instruments to survey residents or providers to assess this. Moreover, as mentioned above, the lack of integrated health and human services data within the County is a challenge for assessing broader health and well-being. County efforts to integrate data will help with *Health in All Policies* budgeting and help with tracking outcomes of alignment efforts.

Prince George's County residents use health care services in Washington, DC. Thus, to accurately measure residents' use of EDs and hospital services, data are needed from both Maryland and DC. While this assessment uses data from both sources, the most recent health assessment from the County relied on data from only Maryland to describe County residents'

use of EDs and hospitals. Thus, it is suggested that funds are allocated to support the Health Department's acquisition of data from DC to fully support ongoing assessment activities.

Finally, there is no *single*, shared data system that allows joint or dual entry of information so that departments have a common operating picture of health needs. This need for shared data was frequently cited as particularly important in trying to coordinate services for individuals, who may have multiple human services needs across departments. In addition to enabling better tracking of health and well-being, data integration can improve the delivery and coordination of services (as mentioned within recommendation 1.3). Moreover, it can be used to reduce service duplication and inefficient use of services. As was previously described, Seattle & King County integrated data as part of the Familiar Faces program identifies frequently jailed individuals with behavioral health conditions and provides comprehensive rehabilitative services which pair behavioral health, primary care, and life skills training into one service delivery.

While there is no single data system in Prince George's County, there are some examples of data sharing, or memoranda of understanding for data sharing, across a few agencies. For example, data on educational, social, and safety have been combined as part of the Transforming Neighborhood Initiative (TNI) and the Fire/EMS Department and the Health Department have collaborated to better track drug overdoses. However, most data sharing initiatives are intended to address a singular goal rather than serve as a long-term system for tracking drivers of health. In some cases, staff may not be aware of data sharing agreements and may be reluctant to share information across agencies.

Example from the Field: Data Coordination and Sharing

An example from Massachusetts may be useful for the County, particularly for coordination and data sharing as the County embarks on a bidirectional referral system to connect clinicians and community-based organizations with funding from the CDC. In 2013, Massachusetts was awarded a state innovation model testing award (SIM grant) from the Centers for Medicare & Medicaid Services. The Massachusetts Department of Public Health used these funds to develop a two-way electronic referral system. Using electronic health records, clinical providers can send referrals to community-based organizations for assistance with out-of-scope health needs. The system is bidirectional in that the community-based organizations provide updates and feedback to clinical providers. The communication between the two entities allow for a more holistic integration of the patient. Any clinical-community partnership, in order to be formally recognized by the state, is required to have at least one e-referral touchpoint. As of 2015, the referrals covered a handful of health-related issues such as diabetes, falls, pediatric asthma, hypertension, nutrition counseling, and a tobacco quit line, among others. At the time, the department was exploring expanding the referral system to include organizations addressing the broader social determinants of health, such as homelessness, violence, and substance abuse (Commonwealth of Massachusetts Department of Public Health, 2015).

3.2 Improve structures that support health and well-being data transparency and stewardship (LB)

One concern raised by stakeholders and noted in our review of Prince George's data was that information on holistic health and well-being was not readily available to County residents, and that many of the performance measures that the County tracks are disproportionately

focused on administrative outputs. The County Board of Health could ensure that centralized data sharing is a requirement going forward.

As noted earlier, there are data gaps on indicators of holistic health, but there are platforms to leverage and improve with that information once available. As mentioned above, the Health Department specific page, PGC Health Zone, has data useful for residents and for broader County planning. However, the Health Department's Open Performance page is not similarly aligned. This OpenStat page offers useful information in six goal areas, but five of those goals are related to access to various components of health care services. While those areas are important for understanding health, these areas do not speak to the quality of the services, are not sufficient for understanding the full picture of health outlined in Figure 1.3 with the exception of the sixth physical environment goal area, and are not sufficient for understanding holistic health outcomes such as individual well-being, quality of life, health literacy, and other aspects of health and well-being. In related areas of human services such as family and social services, key to the advancement of *Health in All Policies*, the goal areas are similarly service-provision based.

While monitoring these issues of access is important, limiting performance-monitoring to outputs rather than including outcomes does not provide the signal value needed for County planners as well as residents to know where progress is really being made. The County has noted its use of the RWJF County Health rankings, summarized throughout the report, but those outcomes are not combined with performance measurement in a way that can be actively and holistically addressed through a common operating and actionable data portal and dashboard. Further, the County Health rankings while useful are incomplete with respect to capturing measures that speak to Prince George's County need areas for special populations (e.g., Chapter Seven), and do not yet offer the types of indicators that suggest that data are being linked for understanding community thriving and flourishing (i.e., the advancing of well-being of people and places, active positive health outcomes and not simply disease reduction).

Examples from the Field: Data Transparency

Santa Monica, California measures well-being dimensions including traditional health outputs and outcomes in physical, social, and emotional health *along with* measures of community cohesion, the quality of the natural and built environment, and economic opportunity (City of Santa Monica, 2020). The information is posted for all community members and the city uses the information to guide planning and budgeting. Data are available through open government platforms.

There are other examples from communities in this area of data transparency and stewardship that may be relevant to the County. For example, Allegheny County's Department of Health and Human Services operates an individual office dedicated specifically for measurement and the tracking of key indicators of population health and wellbeing. The Office of Data Analysis, Research and Evaluation (DARE) convenes several agencies including the Allegheny County Health Department, the Allegheny County Jail, the City of Pittsburgh, the Pittsburgh Bureau of Police, and Pittsburgh Public Schools (Allegheny County Department of Human Services, 2019). Important to note, however, that the DARE analytics website is strictly a conglomerated source for data. The Allegheny County Health Department has an interactive dashboard summarizing key indicators related to chronic disease epidemiology. The community indicators are separated by five health priorities of the health department: access to care, maternal health, chronic disease behaviors, environment, and mental health. While

the dashboard is unique in its external facing nature and ease of use, it does not integrate data from other agencies, as the DARE office does (Allegheny County Health Department, 2019).

Moving Forward

With evolving demographics and changing health care landscape, the Prince George's County Council, acting as the County Board of Health, is considering its future policy approach and resource allocations related to health and well-being. In this context, the assessment sought to describe the health needs of County residents combined with a holistic analysis of the drivers of health within the County, inclusive of the social, economic, built, natural, and health services environments. Further, the study linked key insights from primary and secondary data to recommendations to foster aligned and integrated planning and budgeting across the County to promote health and well-being.

One of the most significant bright spots from this assessment process is the shared interest of leaders and residents to embrace a more integrated and holistic strategy for health and well-being in the County. This shared interest provides an excellent foundation for implementing and sustaining a strategic plan that can be executed. As summarized in the recommendations presented in this report, Prince George's County has opportunities to create a more robust policy framework for *Health in All Policies*, premised on a more cohesive governance structure focused on *Health in All Policies* and a robust budgeting process that codes, categorizes and aligns funding against a shared health framework (Figure 1.3). This approach can be enhanced by a centralized and integrated data system that indicates priority with not only access to services and disease management measures, but also with quality of life and well-being indicators that can track real progress towards a thriving County. Given the motivations for this work came through legislative function, the County has opportunities to leverage this interest via traditional legislative tools, such as spending policies.

Building on a review of these data and recommendations, the next steps for the County are to determine what is structurally and financially possible to implement and what actions will bolster the County's goal of reducing inequities and promoting overall health and well-being. Appendix D offers a sample template for *Health in All Policies* global budgeting. Further, sentinel indicators that can be mapped to the framework presented in this report (Figure 1.3) offer a start for what can be used in future performance management and budgeting processes. Ensuring all County government departments are utilizing a common framework for health and well-being, meaning each department is working toward a set of shared outcomes and understands its primary or secondary contribution to those outcomes, is needed as well. Non-profit organizations and other nongovernmental entities (e.g., private sector businesses) should also be engaged in this approach. Engaging these partners can be accomplished through many mechanisms, including communication about the value of *Health in All Policies*, shared funding, and/or contribution of data to aid in a common operating picture of health and well-being in the County. Finally, when policies are being developed and implemented under the *Health in All Policies* approach, attention should be paid to the high-needs populations described by stakeholders, particularly children, immigrants, and individuals experiencing homelessness, and also to the historical and systemic inequities impacting the health and well-being of many residents.

References

- Agency for Healthcare Research and Quality. (2016). *Access and disparities in access to health care*. As of October 1, 2019:
<https://www.ahrq.gov/research/findings/nhqrdr/nhqrdr15/access.html>
- Agency for Healthcare Research and Quality. (2018). *Preventable emergency department visits*. As of January 10, 2020:
<https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/carecoordination/measure2.html>
- Agency for Toxic Substances and Disease Registry. (2019). *CDC's Social Vulnerability Index (SVI)*. As of January 10, 2020:
<https://svi.cdc.gov>
- Allaire, M., Wu, H., & Lall, U. (2018). National trends in drinking water violations. *Proceedings of the National Academy of Sciences*, 115(9), 2078-2083.
- Allegheny County Department of Human Services. (2019). *Allegheny County analytics*. As of January 10, 2020:
<https://www.alleghenycountyanalytics.us/index.php/about/>
- Allegheny County Health Department. (2019). *Allegheny County community indicators*. As of January 10, 2020:
<https://www.alleghenycounty.us/Health-Department/Resources/Data-and-Reporting/Chronic-Disease-Epidemiology/Allegheny-County-Community-Indicators.aspx>
- Allen, E. M., Call, K. T., Beebe, T. J., McAlpine, D. D., & Johnson, P. J. (2017). Barriers to care and healthcare utilization among the publicly insured. *Medical care*, 55(3), 207-14.
- Alviola, I., V., Pedro, A., Rodolfo, M., Nayga, J., & Thomsen, M. (2013). Food deserts and childhood obesity. *Applied Economic Perspectives and Policy*, 35(1), 106-124.
- American Dental Association Health Policy Institute. (2015). *Oral health and well-being in the United States*. As of January 10, 2020:
<https://www.ada.org/-/media/ADA/Science%20and%20Research/HPI/OralHealthWell-Being-StateFacts/US-Oral-Health-Well-Being.pdf?la=en>
- American Lung Association. (2019). *State of the air: 2019*. As of January 10, 2020:
<https://www.lung.org/our-initiatives/healthy-air/sota/>
- American Public Health Association. (2015). *Better health through equity: Case studies in reframing public health work*. As of January 10, 2020:
https://www.apha.org/-/media/files/pdf/topics/equity/equity_stories.ashx
- Anderson, J., E., Bickler, S., W., Chang, D., C., & Talamini, M., A. (2012). Examining a common disease with unknown etiology: Trends in epidemiology and surgical management of appendicitis in California, 1995-2009. *World Journal of Surgery*, 36(12), 2787-2794.
- Annie E. Casey Foundation. (2019). *Kids Count data center*. As of January 10, 2020:
<https://datacenter.kidscount.org>

- Bay Area Regional Health Inequities Initiative. (2019). *Framework*. As of October 1, 2019: <http://barhii.org/framework/>
- Bell, K., Corbacho, B., Ronaldson, S., Richardson, G., Torgerson, D., & Robling, M. (2018). The impact of pre and perinatal lifestyle factors on child long term health and social outcomes: A systematic review. *Health Economics Review*, 8(2), 2.
- Bellinger, D. C. (2008). Very low lead exposures and children's neurodevelopment. *Current Opinion in Pediatrics*, 20(2), 172-177.
- Benedict, K., M., Reses, H., Vigar, M., Roth, D., M., Roberts, V., A., Mattioli, M., . . . Hill, V., R. (2017). Surveillance for waterborne disease outbreaks associated with drinking water — United States, 2013-2014. *Morbidity and Mortality Weekly Report*, 66(44), 1216.
- Bharmal, N., Derose, K., P., Felician, M., & Weden, M., M. (2015). *Understanding the upstream social determinants of health*. Santa Monica, CA: RAND Corporation, WR-1096-RC. As of January 10, 2020: https://www.rand.org/pubs/working_papers/WR1096.html
- Bhat, M., Clapp, E., Dent, C., Firth, C., Maher, J., McBride, D., . . . Smith, C. (2014). *2014 report card on racial and ethnic disparities: Multnomah County*. As of January 10, 2020: <https://multco.us/file/37530/download>
- Bhutta, Z. A., Lassi, Z. S., Blanc, A., & Donnan, F. (2010). Linkages among reproductive health, maternal health, and perinatal outcomes. *Seminars in Perinatology*, 34, 434-445.
- Blake, K., S., Kellerson, R., L., Simic, A., & Task, E. (2007). *Overcrowding in housing*. As of January 10, 2020: https://www.huduser.gov/publications/pdf/measuring_overcrowding_in_hsg.pdf
- Bloomberg Cities. (2018). *4 strategies that are defining the future of city communications*. As of January 10, 2020: <https://medium.com/@BloombergCities/4-strategies-that-are-defining-the-future-of-city-communications-4ff43fbde975>
- Bose, J., Hedden, S., L., Lipari, R., N., Park-Lee, E., Porter, J., D., & Pemberton, M., R. (2016). *Key substance use and mental health indicators in the United States: Results from the 2015 National Survey on Drug Use and Health*. Rockville, MD: Substance Abuse and Mental Health Services Administration, HHS Publication No. SMA 16-4984, NSDUH Series H-51. As of January 10, 2020: <https://www.samhsa.gov/data/sites/default/files/NSDUH-FFR1-2015/NSDUH-FFR1-2015/NSDUH-FFR1-2015.pdf>
- Brach, C., Keller, D., Hernandez, L., M., Baur, C., Parker, R., Dreyer, B., . . . Schillinger, D. (2012). *Ten attributes of health literate health care organizations*. As of January 10, 2020: https://nam.edu/wp-content/uploads/2015/06/BPH_Ten_HLit_Attributes.pdf
- Bronson, J., & Berzofsky, M. (2017). *Indicators of mental health problems reported by prisoners and jail inmates, 2011-12* (NCJ 250612). As of January 10, 2020: <https://www.bjs.gov/content/pub/pdf/imhprpji1112.pdf>
- Bronson, J., Stroop, J., Zimmer, S., & Berzofsky, M. (2017). *Drug use, dependence, and abuse among state prisoners and jail inmates, 2007-2009*. Washington, DC: Bureau of Justice Statistics, NCJ 250546. As of January 10, 2020: <https://www.bjs.gov/content/pub/pdf/dudaspi0709.pdf>
- Brown, D. L. (2015). Prince George's neighborhoods make 'Top 10 List of Richest Black Communities in America'. *The Washington Post*. As of October 1, 2019: <https://www.washingtonpost.com/news/local/wp/2015/01/23/prince-georges-neighborhoods-make-top-10-list-of-richest-black-communities-in-america/>
- Burr, J., A., Mutchler, J., E., & Gerst, K. (2010). Patterns of residential crowding among Hispanics in later life: Immigration, assimilation, and housing market factors. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 65(6), 772-782.

- Campbell, M., Escobar, O., Fenton, C., & Craig, P. (2018). The impact of participatory budgeting on health and wellbeing: a scoping review of evaluations. *BMC Public Health, 18*(1), 822.
- Centers for Disease Control and Prevention. (2011). *CDC health disparities and inequalities report: United States*. As of January 10, 2020:
<http://www.cdc.gov/mmwr/pdf/other/su6001.pdf>
- Centers for Disease Control and Prevention. (2016). *Health in all policies*. As of January 10, 2020:
<https://www.cdc.gov/policy/hiap/index.html>
- Centers for Disease Control and Prevention. (2018). *Social determinants of health: Know what affects health*. As of January 10, 2020:
<https://www.cdc.gov/socialdeterminants/index.htm>
- Centers for Disease Control and Prevention. (2019a). *Disability and health overview*. As of January 10, 2020:
<https://www.cdc.gov/ncbddd/disabilityandhealth/disability.html>
- Centers for Disease Control and Prevention. (2019b). CDC WONDER. As of January 2020:
<https://wonder.cdc.gov>
- Centers for Medicare & Medicaid Services. (2019). *Maryland all-payer model: Final evaluation report (2014-2018)*. As of January 10, 2020:
<https://innovation.cms.gov/Files/reports/md-allpayer-finalevalrpt-fg.pdf>
- Cha, E., Kim, K. H., Lerner, H. M., Dawkins, C. R., Bello, M. K., Umpierrez, G., & Dunbar, S. B. (2014). Health literacy, self-efficacy, food label use, and diet in young adults. *American Journal of Health Behavior, 38*(3), 331-339.
- Chandra, A., Cahill, M., Yeung, D., & Ross, R. (2018). *Toward an initial conceptual framework to assess community allostatic load*. Santa Monica, CA: RAND Corporation, RR-2559. As of January 10, 2020:
https://www.rand.org/pubs/research_reports/RR2559.html
- Chetty, R., Stepner, M., Abraham, S., Lin, S., Scuderi, B., Turner, N., . . . Cutler, D. (2016). The association between income and life expectancy in the United States, 2001-2014. *Journal of the American Medical Association, 315*(16), 1750-1766.
- City of Portland. (2019). *5b. 20-minute neighborhoods*. As of January 10, 2020:
<https://www.portlandonline.com/portlandplan/index.cfm?a=288098&c=52256>
- City of Santa Monica. (2020). *Office of Civic Wellbeing*. As of January 10, 2020:
<https://wellbeing.smgov.net>
- City of Virginia Beach. (2019). *Family Assessment and Planning Team (FAPT)*. As of January 10, 2020:
<https://www.vbgov.com/government/departments/human-services/about/Pages/fapt.aspx>
- Cohen, A., K., & Syme, S., L. (2013). Education: A missed opportunity for public health intervention. *American Journal of Public Health, 103*(6), 997-1001.
- Commonwealth of Massachusetts Department of Public Health. (2015). *Formalizing community-clinical relationships: e-Referral program*. As of January 10, 2020:
<http://blog.mass.gov/publichealth/wp-content/uploads/sites/11/2016/03/e-Referral.pdf>
- Commonwealth of Massachusetts. (January 1, 2009). Executive Order No. 509: Establishing nutrition standards for food purchased and served by state agencies.
- Commonwealth of Massachusetts. (2019). *Mass in motion municipal wellness and leadership program*. As of January 20, 2020:
<https://www.mass.gov/service-details/mass-in-motion-municipal-wellness-and-leadership-program>
- Cooksey-Stowers, K., Schwartz, M., B., & Brownell, K., D. (2017). Food swamps predict obesity rates better than food deserts in the United States. *International Journal of Environmental Research and Public Health, 14*(11), 1366.

Cote, A., T., Harris, K., C., Panagiotopoulos, C., Sandor, G., G., & Devlin, A., M. (2013). Childhood obesity and cardiovascular dysfunction. *Journal of the American College of Cardiology*, 62(15), 1309-1319.

Council News. (2018). *Board of health launches Mednovate Connect - "Telehealth" Initiative for County's Senior Residents*. As of January 10, 2020:

<https://pgccouncil.us/CivicAlerts.aspx?AID=473&ARC=688>

Council of State Governments Justice Center. (2019). *Police-mental health collaborations: A framework for implementing effective law enforcement responses for people have mental health needs*. As of January 10, 2020:

<https://csgjusticecenter.org/wp-content/uploads/2019/04/Police-Mental-Health-Collaborations-Framework.pdf>

County Health Rankings. (2019a). *About us*. As of January 10, 2020:

<https://www.countyhealthrankings.org/about-us>

County Health Rankings. (2019b). *County health rankings & roadmaps*. As of January 10, 2020:

<https://www.countyhealthrankings.org>

County Health Rankings. (2019c). *County health rankings model*. As of January 10, 2020:

<https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model>

Cunningham, T., J., Croft, J., B., Liu, Y., Lu, H., Eke, P., I., & Giles, W., H. (2017). Vital signs: Racial disparities in age-specific mortality among blacks or African Americans — United States, 1999-2015. *Morbidity and Mortality Weekly Report*, 66(17), 444.

Curry, A., Latkin, C., & Davey-Rothwell, M. (2008). The impact of neighborhood violent crime on inner-city residents in Baltimore, Maryland, USA. *Social Science & Medicine*, 67(1), 23-30.

Cutts, D., B., Meyers, A., F., Black, M., M., Casey, P., H., Chilton, M., Cook, J., T., . . . Frank, D., A. (2011). U.S. housing insecurity and the health of very young children. *American Journal of Public Health*, 101(8), 1508-1514.

Cutuli, J. J., Ahumada, S. M., Herbers, J. E., Laffavor, T. L., Masten, A. S., & Oberg, C. N. (2017). Adversity and children experiencing family homelessness: Implications for health. *Journal of Children and Poverty*, 23(1), 41-55.

Dammann, K., W., & Smith, C. (2009). Factors affecting low-income women's food choices and the perceived impact of dietary intake and socioeconomic status on their health and weight. *Journal of Nutrition Education and Behavior*, 41(4), 242-253.

DASH Connect. (2019). *DASH project profile: King County data across sectors for housing and health*. As of January 15, 2020:

<https://dashconnect.org/wp-content/uploads/2016/10/King-County.pdf>

DC Hospital Association, data files on hospital and emergency department discharges, 2017.

Deilami, K., Kamruzzaman, M., & Liu, Y. (2018). Urban heat island effect: A systematic review of spatio-temporal factors, data, methods, and mitigation measures. *International Journal of Applied Earth Observation and Geoinformation*, 67, 30-42.

Democracy Collaborative. (2019). *Anchor institutions*. As of December 5, 2019:

<https://democracycollaborative.org/sector/anchor-institutions>

Dowd, B., Karmarker, M., Swenson, T., Parashuram, S., Kane, R., Coulam, R., & Jeffrey, M., M. (2014). Emergency department utilization as a measure of physician performance. *American Journal of Medical Quality*, 29(2), 135-143.

Drainoni, M., L., Lee-Hood, E., Tobias, C., Bachman, S., S., Andrew, J., & Maisels, L. (2006). Cross-disability experiences of barriers to healthcare access: Consumer perspectives. *Journal of Disability Policy Studies*, 17(2), 101-115.

- Enterprise Community Partners Inc. (2019). *Housing opportunity for all: Prince George's County's comprehensive housing strategy*. As of January 11, 2020:
<https://www.princegeorgescountymd.gov/DocumentCenter/View/26486/CHS---Housing-Opportunity-for-All-with-appendices---FINAL-updated-8-5-19>
- Ettner, S., L. (1996). New evidence on the relationship between income and health. *Journal of Health Economics*, 15(1), 67-85.
- Eyler, A. A., Valko, C. A., Macchi, M., Fershteyn, Z., Mazzucca, S. L., Brownson, C. A., . . . Brownson, R. C. (2019). Adjusting the equity lens: Gaps in addressing health equity in state chronic disease prevention. *Health Equity*, 3(1), 86-91.
- Feinstein, M., Liu, K., Ning, H., Fitchett, G., & Lloyd-Jones, D., M. (2012). Incident obesity and cardiovascular risk factors between young adulthood and middle age by religious involvement: The Coronary Artery Risk Development in Young Adults (CARDIA) study. *Preventive Medicine*, 54(2), 117-121.
- Flanagan, B. E., Gregory, E. W., Hallisey, E. J., Heitgerd, J. L., & Lewis, B. (2011). A social vulnerability index for disaster management. *Journal of Homeland Security and Emergency Management*, 8(1), Article 3.
- Fleischhacker, S., E., Evenson, K., R., Sharkey, J., Pitts, S., B., J., & Rodriguez, D., A. (2013). Validity of secondary retail food outlet data: A systematic review. *American Journal of Preventative Medicine*, 45(4), 462-473.
- Frost, A., & Hargraves, J. (2018). *Trends in primary care visits*. Washington, DC: Health Care Cost Institute. As of September 15, 2019:
<https://www.healthcostinstitute.org/research/publications/hcci-research/entry/trends-in-primary-care-visits>
- Fulginiti, J., & Melser, L. (2020). *Maryland unemployment claims rise by 10,000 following weeks of decline*. As of June 15, 2020:
<https://www.wbalvtv.com/article/maryland-unemployment-claims-raise-10000-following-weeks-of-decline/32837015>
- Garfield, R. L., Lave, J. R., & Donohue, J. M. (2010). Health reform and the scope of benefits for mental health and substance use disorder services. *Psychiatric Services*, 61(11), 1081-1086.
- Genuis, S. J., & Genuis, S. K. (2004). Managing the sexually transmitted disease pandemic: A time for reevaluation. *American Journal of Obstetrics and Gynecology*, 191(4), 1103-1112.
- Gordon-Larsen, P. (2014). Food availability/convenience and obesity. *Advances in Nutrition*, 5(6), 809-817.
- Governor's Office of Crime Control & Prevention. (2019). *Fourth report to the state of Maryland - Deaths involving a law enforcement officer*. As of June 10, 2020:
<http://gocccp.maryland.gov/wp-content/uploads/Deaths-Involving-a-Law-Enforcement-Officer-2018.pdf>
- Grant, R., Gracy, D., Goldsmith, G., Sobelson, M., & Johnson, D. (2014). Transportation barriers to child health care access remain after health reform. *JAMA Pediatrics*, 168(4), 385-386.
- Gregg, A., Tutek, J., Leatherwood, M., D., Crawford, W., Friend, R., Crowther, M., & McKinney, R. (2019). Systematic review of community paramedicine and EMS mobile integrated health care interventions in the United States. *Population Health Management*, 22(3), 213-222.
- Grosso, G., Bella, F., Godos, J., Sciacca, S., Del Rio, D., Ray, S., . . . Giavannucci, E., L. (2017). Possible role of diet in cancer: Systematic review and multiple meta-analyses of dietary patterns, lifestyle factors, and cancer risk. *Nutrition Reviews*, 75(6), 406-419.
- Grove, M., Ogden, L., Pickett, S., Boone, C., Buckley, G., Locke, D., H., . . . Hall, B. (2018). The legacy effect: Understanding how segregation and environmental injustice unfold over time in Baltimore. *Annals of the American Association of Geographers*, 108(2), 524-537.
- Guessous, I., Dash, C., Lapin, P., Doroshenko, M., Smith, R., A., Klabunde, C., N., & National Colorectal Cancer Roundtable Screening Among the 65 Plus Task Group. (2010). Colorectal cancer screening barriers and facilitators in older persons. *Preventive Medicine*, 30(1-2), 3-10.

- Hacker, K., Anies, M., Folb, B. L., & Zallman, L. (2015). Barriers to health care for undocumented immigrants: A literature review. *Risk Management and Healthcare Policy*, 8, 175-183.
- Hacker, K., Monroe, C., & Yonas, M. (2017). *Innovative partnerships to support successful public health infrastructure*. Atlanta, GA: APHA Annual Meeting. As of June 17, 2019: <https://apha.confex.com/apha/2017/meetingapp.cgi/Paper/380704>
- Halfon, N., Kandyce, L., & Slusser, W. (2013). Associations between obesity and comorbid mental health, developmental, and physical health conditions in a nationally representative sample of U.S. children aged 10 to 17. *Academic Pediatrics*, 13(1), 6-13.
- Hamilton, E., R., & Evans, E. *State health insurance policy and insuring immigrant children*. As of January 15, 2020: https://poverty.ucdavis.edu/sites/main/files/file-attachments/policy_brief_hamilton_healthinsurance_print.pdf
- Health Resources & Services Administration. (2019a). *Area health resources files*. As of August 19, 2019: <https://data.hrsa.gov/topics/health-workforce/ahrf>
- Health Resources & Services Administration. (2019b). *Health professional shortage areas*. As of August 19, 2019: <https://bhwh.hrsa.gov/shortage-designation/hpsas>
- Healthy Food Policy Project. (2020). *Prince George's County food equity council: Taking on food swamps through policy change*. As of March 5, 2020: <https://healthyfoodpolicyproject.org/case-studies/prince-georges-county-md>
- Hencoski, P., Ahluwalia, U., S., Seling, S., & Buckland, V. (2017). *Successful implementation of integration and interoperability in a health and human services enterprise*. As of September 14, 2019: <https://imgsvr.eventrebels.com/ERImg/01/96/17/3845465/112819-2-39175.pdf>
- Hendey, L., & Posey, L. (2018). *Racial inequities in Prince George's County 2011 - 2015*. As of June 7, 2019: https://www.urban.org/sites/default/files/publication/95391/2018.02.05_prince_georges_county_finalized_errata_0.pdf
- Hoffman, J. S., Shandas, V., & Pendleton, N. (2020). The effects of historical housing policies on resident exposure to intra-urban heat: A study of 108 US urban areas. *Climate*, 8(1), 12.
- Holliday, S., B., Pace, N., M., Gowensmith, N., Packer, I., Murrie, D., Virani, A., . . . Hunter, S., B. (2020). *Estimating the size of the Los Angeles County Jail mental health population appropriate release into community services*. Santa Monica, CA: RAND Corporation, RR-4328-LAC. As of June 5, 2020: https://www.rand.org/pubs/research_reports/RR4328.html
- Horowitz Center for Health Literacy. (2019a). *Community health literacy*. As of September 12, 2020: <https://sph.umd.edu/center/hchl/community-health-literacy>
- Horowitz Center for Health Literacy. (2019b). *Tools*. As of September 12, 2020: <http://sph.umd.edu/center/hchl/tools>
- HUD Exchange. (2018). *Point-in-time estimates by continuums of care from the annual homeless assessment report to Congress*. As of September 20, 2020: <https://www.hudexchange.info/resource/5783/2018-ahar-part-1-pit-estimates-of-homelessness-in-the-us/>
- Human Services Research Institute. (2019). *Baltimore public behavioral health system gap analysis*. As of January 12, 2020: <https://www.powerdms.com/public/BALTIMOREMD/documents/623350>
- Invest Detroit. (2019a). Strategic Neighborhood Fund 2.0 (brochure). As of June 15, 2019: <https://www.dropbox.com/s/n0r7xjn9p9x6edr/SNF2.0%20book%20-%20single%20page.pdf?dl=0>
- Invest Detroit. (2019b). *An unprecedented effort to strengthen our neighborhoods*. As of June 15, 2019: <http://investdetroit.com/an-unprecedented-effort-to-strengthen-our-neighborhoods/>

- Jacobs, D. E., Clickner, R. P., Zhou, J. Y., Viet, S. M., Marker, D. A., Rogers, J. W., . . . Friedman, W. (2002). The prevalence of lead-based paint hazards in US housing. *Environmental Health Perspectives*, *110*(10), A599-A606.
- James, P., Banay, R. F., Hart, J. E., & Laden, F. (2015). A review of the health benefits of greenness. *Current Epidemiology Reports*, *2*(2), 131-142.
- Jensen, M., D., Ryan, D., H., Apovian, C., M., Ard, J., D., Comuzzie, A., G., Donato, K., A., . . . Tomaselli, G., F. (2014). 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. *Circulation*, *129*(25), 2985-3023.
- Johns Hopkins Center for a Livable Future. (2019). *Maryland food system map*. As of February 3, 2020: <https://mdfoodsystemmap.org>
- Johns Hopkins University. (2020). *COVID-19 dashboard by the Center for Systems Science and Engineering*. As of June 5, 2020: <https://coronavirus.jhu.edu/>
- Johnson, L., H., Chambers, P., & Dexheimer, J., W. (2016). Asthma-related emergency department use: Current perspectives. *Open Access Emergency Medicine: OAEM*, *8*, 47-55.
- Johnson, S., L., Solomon, B., S., Shields, W., C., McDonald, E., M., McKenzie, L., B., & Gielen, A., C. (2009). Neighborhood violence and its association with mothers' health: Assessing the relative importance of perceived safety and exposure to violence. *Journal of Urban Health*, *86*(4), 538-550.
- Keane, C. P., & Swinton, A. D. (2017). *Findings from the 2017 School Climate Survey*. Prince George's County, MD: Prince George's County Public Schools. As of June 15, 2019: <https://www.pgcps.org/research-and-evaluation/cards/publications/Findings-from-the-2017-School-Climate-Survey/>
- Kessler, R., C., Angermeyer, M., Anthony, J., C., Graaf, R., D., Demyttenaere, K., Gasquet, I., . . . Ustun, T., B. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry*, *6*(3), 168-176.
- Khullar, D., & Chokshi, D., A. (2018). Health, income, and poverty: Where we are & what could help. *Health Affairs Health Policy Brief*. As of September 7, 2019: <https://www.healthaffairs.org/doi/10.1377/hpb20180817.901935/full/>
- King County. (2013). *Health and human services transformation plan*. As of July 22, 2019: <https://www.kingcounty.gov/elected/executive/health-human-services-transformation/%7e/media/exec/HHStransformation/KCHealthandHumanServicesTransformationPlan2013.ashx>
- King County. (2019). *Familiar faces initiative*. As of July 22, 2019: <https://www.kingcounty.gov/elected/executive/health-human-services-transformation/familiar-faces.aspx>
- Klein, H., & Levine, M. (2018). *Health in all policies 2018: In accordance with executive order 07-15*. As of September 15, 2019: https://www.healthvermont.gov/sites/default/files/documents/pdf/HIAP_annual-report-2018.pdf
- Kumar, S., & Kelly, A. S. (2017). Review of childhood obesity: From epidemiology, etiology, and comorbidities to clinical assessment and treatment. *Mayo Clinic Proceedings*, *92*(2), 251-265.
- Kutner, M., Greenberg, E., Jin, Y., & Paulsen, C. (2006). *The health literacy of America's adults: Results from the 2003 National Assessment of Adult Literacy*. Washington, DC: US Department of Education, NCES 2006-483. As of August 23, 2019: <https://nces.ed.gov/pubs2006/2006483.pdf>
- La Clínica Del Pueblo. (2018). *Partnering for health equity: Strategies, partnerships and recommendations for immigrants' health in Prince George's County*. As of September 22, 2019: <https://www.lcdp.org/docs/doc-publication-health-equity-report-2018-min.pdf>

- Leininger, L., & Levy, H. (2015). Child health and access to medical care. *Future Child*, 25(1), 65-90.
- Leonard, T., Hughes, A. E., Donegan, C., Santillan, A., & Pruitt, S. L. (2018). Overlapping geographic clusters of food security and health: Where do social determinants and health outcomes converge in the U.S.? *SSM – Population Health*, 5, 160-170.
- Levanthal, T., & Newman, S. (2010). Housing and child development. *Children and Youth Services Review*, 32(9), 1165-1174.
- Levine, D., M., & Linder, J., A. (2016). Retail clinics shine a harsh light on the failure of primary care access. *Journal of General Internal Medicine*, 31(3), 260-262.
- Litman, T. (2013). Transportation and public health. *Annual Review of Public Health*, 34, 217-233.
- Liu, Y., Wheaton, A., G., Chapman, D., P., Cunningham, T., J., Lu, H., & Croft, J., B. (2016). Prevalence of healthy sleep duration among adults—United States, 2014. *Morbidity and Mortality Weekly Report*, 65(6), 137-41.
- Live Well Allegheny. (2019). Who we are. As of September 9, 2019:
<http://www.livewellallegheny.com/about-us/>
- Live Well San Diego. (2014). *How we will measure progress for Live Well San Diego fact sheet*. As of September 9, 2019:
https://www.sandiegocounty.gov/content/dam/sdc/live_well_san_diego/indicators/Indicators_Fact_Sheet.pdf
- Live Well San Diego. (2018). *Live Well San Diego food system initiative encourages residents to prevent food waste*. As of September 9, 2019:
<http://www.livewellsd.org/content/livewell/home/all-articles/news/april-2018/live-well-san-diego-food-system-initiative-encourages-residents-to-prevent-food-waste.html>
- Lovasi, G. S., Grady, S., & Rundle, A. (2011). Steps forward: review and recommendations for research on walkability, physical activity and cardiovascular health. *Public Health Reviews*, 33(2), 484-506.
- Lurie, N., Harris, K. M., Shih, R., A., Ruder, T., Price, A., Martin, L. G., . . . Blanchard, J. C. (2009). *Assessing health and health care in Prince George's County*. Santa Monica, CA: RAND Corporation, TR-655-PGCC. As of August 15, 2019:
https://www.rand.org/pubs/technical_reports/TR655.html
- Lurie, N., Martin, L. T., Ruder, T., Escarce, J. J., Ghosh-Dastidar, B., Sherman, D., . . . Fremont, A. (2010). *Estimating and mapping health literacy in the state of Missouri*. Santa Monica, CA: RAND Corporation, WR-735-MFH. As of August 15, 2020:
https://www.rand.org/pubs/working_papers/WR735.html
- Marcozzi, D., Carr, B., Liferidge, A., Baehr, N., & Browne, B. (2018). Trends in the contribution of emergency departments to the provision of hospital-associated health care in the USA. *International Journal of Health Services*, 48(2), 267-288.
- Martinez, O., Wu, E., Sandfort, T., Dodge, B., Carballo-Diequez, A., Pinto, R., . . . Chavez-Baray, S. (2015). Evaluating the impact of immigration policies on health status among undocumented immigrants: A systematic review. *Journal of Immigrant and Minority Health*, 17(3), 947-970.
- Maruschak, L., M., Berzofsky, M., & Unangst, J. (2015). *Medical problems of state and federal prisoners and jail inmates, 2011-12* (NCJ 248491). As of December 16, 2019:
<https://www.bjs.gov/content/pub/pdf/mpsfpj1112.pdf>
- Maryland Cancer Prevention Education Screening and Treatment Program. (2017). *2017 cancer data*. As of December 10, 2019:
[https://phpa.health.maryland.gov/cancer/SiteAssets/Pages/surv_data-reports/2017_CRF_Cancer_Report_\(20170827\).pdf](https://phpa.health.maryland.gov/cancer/SiteAssets/Pages/surv_data-reports/2017_CRF_Cancer_Report_(20170827).pdf)

- Maryland Department of Health. (2018). *Maryland vital statistics annual report 2018*. As of September 19, 2019: <https://health.maryland.gov/talbotcounty/Documents/2018%20Maryland%20Vital%20Statistics%20Annual%20Report.pdf>
- Maryland Department of Health. (2019a). *Immigration status requirements for Medicaid*. As of March 3, 2020: <https://mmcp.health.maryland.gov/Pages/Medicaid-Immigration-Status-Requirements.aspx>
- Maryland Department of Health. (2019b). *Unintentional drug- and alcohol-related intoxication deaths in Maryland*. As of June 10, 2019: https://health.maryland.gov/vsa/Documents/Quarterly%20Drug_Alcohol_Intoxication_Report_2019_Q1.pdf
- Maryland Department of Health. (2020). *Maryland COVID-19 data dashboard*. As of June 5, 2020: <https://coronavirus.maryland.gov>
- Maryland Department of Health Dataset Query System. (2016). *Behavioral Risk Factor Surveillance System*. As of January 2020: <https://ibis.health.maryland.gov/query/selection/brfss/BRFSSSelection.html>
- Maryland Department of Health Dataset Query System. (2017a). *Behavioral Risk Factor Surveillance System*. As of January 2020: <https://ibis.health.maryland.gov/query/selection/brfss/BRFSSSelection.html>
- Maryland Department of Health Dataset Query System. (2017b). *Maryland Youth Risk Behavior Survey and Youth Tobacco Survey*. As of January 2020: <https://ibis.health.maryland.gov/query/selection/yrbs/YRBSSelection.html>
- Maryland Department of Health Infectious Disease Bureau. (2019). *STI Data and Statistics*. As of January 2020: <https://health.maryland.gov/phpa/OIDPCS/CSTIP/Pages/STI-Data-Statistics.aspx>
- Maryland Department of Labor. (2017). *Maryland Industry Projections 2016-2026: Workforce information and performance*. As of August 5, 2019: <https://www.dllr.state.md.us/lmi/iandoproj/industry.shtml>
- Maryland Department of the Environment. (2018a). *Annual report: Childhood blood lead surveillance in Maryland*. As of September 13, 2019: <https://mde.maryland.gov/programs/LAND/Documents/LeadReports/LeadReportsAnnualChildhoodLeadRegistry/LeadReportCLR2018.pdf>
- Maryland Department of the Environment. (2018b). *Lead poisoning prevention program*. As of September 13, 2019: <https://mde.maryland.gov/programs/Land/LeadPoisoningPrevention/Pages/index.aspx>
- Maryland Department of the Environment. (2018c). *Lead poisoning prevention program, Maryland childhood blood lead surveillance calendar year 2017, annual report*. As of September 13, 2019: <https://mde.maryland.gov/programs/LAND/Documents/LeadReports/LeadReportsAnnualChildhoodLeadRegistry/LeadReportCLR2017.pdf>
- Maryland Governor's Office of Crime Control & Prevention. (2019). *Maryland crime data*. As of January 12, 2020: <http://goccp.maryland.gov/crime-statistics/>
- Maryland Health Benefit Exchange. (2018). *2018 Annual Report of the Maryland Health Benefit Exchange*. As of January 2020: https://www.marylandhbe.com/wp-content/uploads/2018/11/MHC_AnnualReport_2018.pdf
- Maryland Health Benefit Exchange. (2019). *2019 Annual Report of the Maryland Health Benefit Exchange*. As of January 2020: https://www.marylandhbe.com/wp-content/uploads/2019/MHC_Annual_Report%202019.pdf

Maryland Health Care Commission. (2019a). *Health Data and Quality*. As of March 20, 2020:
<https://mhcc.maryland.gov/mhcc/pages/apcd/apcd/apcd.aspx>

Maryland Health Care Commission. (2019b). *Maryland hospice use rate by Maryland region, FY2018*. As of March 20, 2020:
https://mhcc.maryland.gov/mhcc/pages/hcfs/hcfs_hospice/documents/Hospice%20Use_FY2018_Tables%20and%20Charts_20191125.pdf

Maryland Health Services Cost Review Commission, data files on hospital and emergency department discharges, 2017.

Maryland Institute for Emergency Medical Services Systems. (2018). Mobile integrated health (MIH) programs are growing in Maryland. *Maryland EMS News*. As of July 23, 2020:
<http://www.miemss.org/home/Portals/0/Docs/Newsletter/EMS-News-Special-Edition-2018-Final.pdf?ver=2018-02-26-131628-823>

Maryland Interagency Council on Homelessness. (2018). *2018 Annual report on homelessness*. As of September 13, 2019:
<https://dhcd.maryland.gov/HomelessServices/Documents/2018AnnualReport.pdf>

Maryland State Board of Elections. (2019). *Recent releases and statistics*. As of September 5, 2019:
https://elections.maryland.gov/press_room/index.html

Maryland State Department of Education. (2019a). *2019 Maryland school report cards*. As of September 5, 2019:
<https://reportcard.msde.maryland.gov>

Maryland State Department of Education. (2019b). *2019 Prince George's County schools at a glance*. As of September 5, 2019:
<https://reportcard.msde.maryland.gov/Graphs/#!/AtaGlance/Index/3/17/6/16/XXXX/3/17/6/16/XXXX>

Maryland Vital Statistics Administration. (2019). *Vital statistics and reports*. As of September 5, 2019:
<https://health.maryland.gov/vsa/Pages/reports.aspx>

Maryland-National Capital Park and Planning Commission. (2019). *National park service: Park unit boundaries*. As of September 5, 2019:
<https://public-nps.opendata.arcgis.com/datasets/national-park-service-park-unit-boundaries>

Massachusetts Department of Transitional Assistance. (2019). *Healthy incentives program (HIP) for clients*. As of January 20, 2020:
<https://www.mass.gov/service-details/healthy-incentives-program-hip-for-clients>

Massachusetts Department of Transportation. (2011). *Healthy transportation compact award*. As of September 10, 2019:
<https://blog.mass.gov/transportation/greendot/healthy-transportation-compact-award/>

Mayne, S., L., Moore, K., A., Powell-Wiley, T., M., Evenson, K., R., Block, R., & Kershaw, K., N. (2018). Longitudinal associations of neighborhood crime and perceived safety with blood pressure: The Multi-Ethnic Study of Atherosclerosis (MESA). *American Journal of Hypertension*, 31(9), 1024-1032.

McConnell, E., D. (2015). Restricted movement: Nativity, citizenship, legal status, and the residential crowding of Latinos in Los Angeles. *Social Problems*, 62(1), 142-162.

McGinnis, T., Crawford, M., & Somers, S. A. (2014). *A state policy framework for integrating health and social services*. As of September 10, 2019:
http://www.statecoverage.org/files/CMWF_State_Policy_Framework_Integrating_Health_Social_Services.pdf

Mehrotra, A., & Lave, J., R. (2012). Visits to retail clinics grew fourfold from 2007 to 2009 although their share of overall outpatient visits remains low. *Health Affairs*, 31(9), 2123-2129.

- Melkas, T. (2013). Health in all policies as a priority in Finnish health policy: A case study on national health policy development. *Scandinavian Journal of Public Health*, 41(11), 3-28.
- Meltzer, R., & Schwartz, A. (2016). Housing affordability and health: Evidence from New York City. *Housing Policy Debate*, 26(1), 80-104.
- Mensah, G., A., Mokdad, A., H., Ford, E., S., Greenlund, K., J., & Croft, J., B. (2005). State of disparities in cardiovascular health in the United States. *Circulation*, 111(10), 1233-1241.
- Metropolitan Washington Council of Governments. (2019). *Homelessness in metropolitan Washington: Results and analysis from the annual point-in-time count of persons experiencing homelessness*. As of February 5, 2020: https://wtop.com/wp-content/uploads/2019/05/2019_PIT_report_FINAL.pdf
- Miller, S. (2016). *The Healthy transportation compact: Public health needs to reclaim leadership*. As of August 10, 2019: https://www.livablestreets.info/the_healthy_transportation_compact_4_14_16
- Misiaszek, C., Buzogany, S., & Freishtat, H. (2018). *Baltimore City's food environment: 2018 report*. As of August 10, 2019: <https://clf.jhsph.edu/sites/default/files/2019-01/baltimore-city-food-environment-2018-report.pdf>
- Mohanam, S., Tapp, H., McWilliams, A., & Dulin, M. (2014). Obesity and asthma: Pathophysiology and implications for diagnosis and management in primary care. *Experimental Biology and Medicine*, 239(11), 1531-1540.
- Morganti, K. G., Bauhoff, S., Blanchard, J. C., Abir, M., Iyer, N., Smith, A., . . . Kellermann, A. L. (2013). The evolving role of emergency departments in the United States. *RAND Health Quarterly*, 3(2), 3.
- Multnomah County Health Department. (2012). *Equity and empowerment lens*. As of August 10, 2019: <https://multco.us/file/31833/download>
- Narang, I., & Mathew, J., L. (2012). Childhood obesity and obstructive sleep apnea. *Journal of Nutrition and Metabolism*, 2012, 1-8.
- Nardone, A., Casey, J., A., Morello-Frosch, R., Mujahid, M., Balmes, J., R., & Thakur, N. (2020). Associations between historical residential redlining and current age-adjusted rates of emergency department visits due to asthma across eight cities in California: an ecological study. *The Lancet Planetary Health*, 4(1), e24-e31.
- National Cancer Institute. (2019). *Cancer disparities*. As of March 10, 2020: <https://www.cancer.gov/about-cancer/understanding/disparities#contributing-factors>
- National Center for Chronic Disease Prevention and Health Promotion. (2019). *How you can prevent chronic diseases*. As of March 10, 2020: <https://www.cdc.gov/chronicdisease/about/prevent/index.htm>
- National Center for Health Statistics. (2018). *Table 20. Use of selected substances in the past month among persons aged 12 years and over, by age, sex, race, and Hispanic origin: United States, selected years 2002-2017*. As of August 20, 2019: <https://www.cdc.gov/nchs/data/hus/2018/020.pdf>
- National Institute for Health Care Management Foundation. (2020). *Hospital consolidation: Trends, impact, & outlook*. As of February 15, 2020: <https://www.nihcm.org/categories/hospital-consolidation-trends-impacts-outlook>
- Nelson, C., Sloan, J., & Chandra, A. (2019). *Examining civic engagement links to health: Findings from the literature and implications for a Culture of Health*. Retrieved from Santa Monica, CA: RAND Corporation, RR-3163-RWJ. As of January 15, 2020: https://www.rand.org/pubs/research_reports/RR3163.html
- NYC Health. (2020). *Age-adjusted rates of lab confirmed COVID-19*. As of June 8, 2020: <https://www1.nyc.gov/assets/doh/downloads/pdf/imm/covid-19-deaths-race-ethnicity-04162020-1.pdf>

Oppenheimer, S. C., Nurius, P. S., & Green, S. (2018). Homelessness history impacts on health outcomes and economic and risk behavior intermediaries: New insights from population data. *Family in Society: The Journal of Contemporary Social Services*, 97(3), 230-42.

Orange County Department on Aging. (2020). *Community resource guide for seniors and their families*. As of June 5, 2020:

<https://www.orangecountync.gov/DocumentCenter/View/96/Community-Resource-Guide-for-Seniors-PDF?bidId=>

Orange County Homeless Management Information System. (2014). *HMIS related HUD definitions*. As of January 5, 2020:

http://www.ochmis.org/documents/file_HMIS_Related_HUD_Definitions.pdf

Palm Beach County. (2019). *About children's services councils*. As of June 5, 2020:

<https://www.cscpb.org/create-a-csc>

Papas, M. A., Alberg, A. J., Ewing, R., Helzlsouer, K. J., Gary, T. L., & Klassen, A. C. (2007). The built environment and obesity. *Epidemiologic Reviews*, 29(1), 129-143.

Parker, K., Horowitz, J., M., & Brown, A. (2020). *About half of lower-income Americans report household job or wage loss due to COVID-19*. As of June 5, 2020:

<https://www.pewsocialtrends.org/2020/04/21/about-half-of-lower-income-americans-report-household-job-or-wage-loss-due-to-covid-19/>

Partnership for Community Resources. (2019). *2019-2020 Fauquier County community resource guide*.

As of June 5, 2020:

<https://www.fauquierresources.com>

Pollack, C., E., Griffin, B., A., & Lynch, J. (2010). Housing affordability and health among homeowners and renters. *American Journal of Preventive Medicine*, 39(6), 515-521.

Powell, L., M., Auld, M., C., Chaloupla, F., J., O'Malley, P., M., & Johnston, L., D. (2007). Associations between access to food stores and adolescent body mass index. *American Journal of Preventive Medicine*, 33(4), S301-307.

Prince George's County. (2019a). *2020 Fiscal year proposed budget*. As of March 15, 2020:

<https://www.princegeorgescountymd.gov/3108/2020-Fiscal-Year-Proposed-Budget>

Prince George's County. (2019b). *Fire/EMS department fiscal year budget*. As of March 15, 2020:

https://www.princegeorgescountymd.gov/DocumentCenter/View/25098/Fire_EMS-Department

Prince George's County. (2019c). *Prince George's County human services budget analysis, FY2008 - 2018*.

Information shared by Prince George's County Council Budget and Policy Analysis Team.

Prince George's County Department of Family Services. (2019). *Department of Family Services 2019 Fiscal Year Approved Budget*. As of January 15, 2020:

<https://www.princegeorgescountymd.gov/DocumentCenter/View/21412/Department-of-Family-ServicesPDF>

Prince George's County Department of Housing and Community Development. (2019a). *Prince George's fiscal year 2020 annual action plan, as amended – final*. As of January 15, 2020:

<https://www.princegeorgescountymd.gov/DocumentCenter/View/27964/PGC-DHCD-FY-2020-Annual-Action-Plan-as-amended-Final-11-19-19>

Prince George's County Department of Housing and Community Development. (2019b). *Consolidated annual performance and evaluation report federal fiscal year 2018 (county fiscal year 2019)*. As of January 10, 2020:

<https://www.princegeorgescountymd.gov/DocumentCenter/View/27081/PGC-FY-2019-CAPER>

Prince George's County Department of Social Services. (2019). Data files on resident engagement with social services.

- Prince George's County Economic Development Corporation. (2017). *Food desert relief plan*. As of September 15, 2020:
<https://pgccouncil.us/540/Food-Desert-Relief-Plan>
- Prince George's County Fire and Emergency Medical Services Department. (2019). Data files EMS incidents.
- Prince George's County Health Department. (2016). *2016 Prince George's County community health assessment*. As of December 15, 2020:
https://pophealth.health.maryland.gov/Documents/Resources/Prince%20George%27s_CHNA_2016.pdf
- Prince George's County Health Department. (2019a). *2018 Opioid overdose report*. As of September 15, 2020:
<https://www.princegeorgescountymd.gov/Archive/ViewFile/Item/3108>
- Prince George's County Health Department. (2019b). *2019 Prince George's County community health assessment*. As of December 15, 2020:
https://www.dchweb.org/sites/doctors-community-hospital/files/community_health_assesment2019.pdf
- Prince George's County Health Department. (2019c). *Maternal and infant health report*. As of September 15, 2020:
<https://www.princegeorgescountymd.gov/Archive/ViewFile/Item/3107>
- Prince George's County Planning Department. (2014). *Plan 2035: Prince's George's approved general plan*. As of August 10, 2019:
http://mncppcapps.org/planning/publications/BookDetail.cfm?item_id=279&Category_id=1
- Prince George's County Public Schools. (2018). *Facts and figures*. As of September 12, 2019:
<https://www.pgcps.org/facts-and-figures/>
- Prince George's County Public Schools. (2019). Data files on additional services.
- Prince George's Healthcare Action Coalition. (2018). *Transformative change: Our role in achieving health equity for Prince George's County*. As of August 10, 2019:
<http://www.regionalprimarycare.org/wp-content/uploads/2018/10/Prince-Georges-County-Health-Equity-Forum-Report-June-2018-Final.pdf>
- Prince George's Senior Provider Network. (2019). *Prince George's County senior resource guide*. As of February 3, 2020:
<https://www.princegeorgescountymd.gov/DocumentCenter/View/24613/2019-Prince-Georges-Senior-Resource-Guide>
- Regional Primary Care Coalition. (2018). *The healthcare landscape in Prince George's County: Opportunities for improvement*. As of November 15, 2019:
<http://www.regionalprimarycare.org/wp-content/uploads/2018/07/The-Healthcare-Landscape-in-Prince-Georges-County.pdf>
- Ricks, J. (2019). County receives \$3.4 million to address youth homelessness. *The Prince George's Sentinel*. As of November 15, 2019:
<https://pgs.thesentinel.com/2019/09/11/county-receives-3-4-million-to-address-youth-homelessness/>
- Riportella-Muller, R., Selby-Harrington, M., L., Richardson, L., A., Donat, P., L., Luchok, K., J., & Quade, D. (1996). Barriers to the use of preventive health care services for children. *Public Health Reports*, 111(1), 71.
- Roof, K., & Oleru, N. (2008). Public health: Seattle and King County's push for the built environment. *Journal of Environmental Health*, 71(1), 24-27.

Rudolph, L., Caplan, J., Ben-Moshe, K., & Dillon, L. (2013). *Health in All Policies: A guide for state and local governments*. Washington, DC and Oakland, CA: American Public Health Association and Public Health Institute. As of September 10, 2020:

<http://www.phi.org/uploads/application/files/udt4vq0y712qpb1o4p62dexjlgxlnogpq15gr8pti3y7ckzysi.pdf>

San Diego Association of Governments. (2018). *Public health*. As of September 15, 2019:

https://www.sandag.org/uploads/meetingid/meetingid_4898_23443.pdf

Secretary's Advisory Committee for Healthy People 2030. (2018). *Issue briefs to inform development and implementation of Healthy People 2030*. As of September 15, 2019:

https://www.healthypeople.gov/sites/default/files/HP2030_Committee-Combined-Issue%20Briefs_2019-508c.pdf

Sharpe, R., A., Taylor, T., Fleming, L., E., Morrissey, K., Morris, G., & Wigglesworth, R. (2018). Making the case for 'whole system' approaches: Integrating public health and housing. *International Journal of Environmental Research and Public Health*, 15(11), 2345.

Shi, L., Lebrun, L., A., & Tsai, J. (2009). The influence of English proficiency on access to care. *Ethnicity & Health*, 14(6), 625-642.

Shier, V., An, R., & Sturm, R. (2012). Is there a robust relationship between neighbourhood food environment and childhood obesity in the USA? *Public Health*, 126(7), 723-730.

Smith, M., Hosking, J., Woodward, A., Witten, K., MacMillan, A., Field, A., . . . Mackie, H. (2017). Systematic literature review of built environment effects on physical activity and active transport—an update and new findings on health equity. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 158.

Stafford County. (2019). *Children's services act for at risk youth and families: FAQs*. As of March 3, 2020:

<https://staffordcountyva.gov/Faq.aspx?QID=218>

Substance Abuse and Mental Health Services Administration. (2019). Key substance use and mental health indicators in the United States: Results from the 2018 National Survey on Drug Use and Health. Rockville, MD: PEP19-5068. As of January 10, 2020:

<https://store.samhsa.gov/product/key-substance-use-and-mental-health-indicators-in-the-united-states-results-from-the-2018-national-survey-on-Drug-Use-and-Health/PEP19-5068>

Taylor, L. (2018). Housing and health: An overview of the literature. *Health Affairs Health Policy Brief*. As of September 7, 2019:

<https://www.healthaffairs.org/doi/10.1377/hpb20180313.396577/full/>

The New York Times. (2020). *Maryland coronavirus map and case count*. As of June 5, 2020:

<https://www.nytimes.com/interactive/2020/us/maryland-coronavirus-cases.html#county>

Trust for America's Health. (2018). *Braiding and blending funds to support community health improvement: A compendium of resources and examples*. As of August 15, 2019:

<https://www.tfah.org/wp-content/uploads/2018/01/TFAH-Braiding-Blending-Compendium-FINAL.pdf>

U.S. Bureau of Labor Statistics. (2019). *Local area unemployment statistics*. As of January 10, 2020:

<https://www.bls.gov/lau/>

U.S. Census Bureau. (2016). *County Business Patterns*. As of January 15, 2020:

<https://www.census.gov/programs-surveys/cbp/data.html>

U.S. Census Bureau. (2019a). *American community survey 2009 – 2018 1-year summary files*. As of January 7, 2020:

<https://www.census.gov/programs-surveys/acs/data/summary-file.html>

U.S. Census Bureau. (2019b). *American community survey 2014 – 2018 5-year estimates now available*. As of January 7, 2020:

<https://www.census.gov/newsroom/press-releases/2019/acs-5-year.html>

- U.S. Department of Agriculture. (2018). *Food access research atlas*. As of October 1, 2019: <https://www.ers.usda.gov/data-products/food-access-research-atlas/>
- U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion. (2010). *National action plan to improve health literacy*. As of October 1, 2019: https://health.gov/communication/hlactionplan/pdf/health_literacy_action_plan.pdf
- U.S. Department of Housing and Urban Development. (2019). *Rental burdens: rethinking affordability measures*. As of June 10, 2020: https://www.huduser.gov/portal/pdredge/pdr_edge_featd_article_092214.html
- U.S. Environmental Protection Agency. (2017). *National walkability index*. As of October 1, 2019: <https://www.epa.gov/smartgrowth/smart-location-mapping#walkability>
- Ulmer, J., M., Wolf, K., L., Backman, D., R., Tretheway, R., L., Blain, C., J., A., O'Neil-Dunne, J., P., M., & Frank, L., D. (2016). Multiple benefits of urban tree canopy: The mounting evidence for a green prescription. *Health & Place*, 42, 54-62.
- University of Maryland School of Public Health. (2012). *Transforming health in Prince George's County, Maryland: A public health impact study*. As of October 1, 2019: <https://sph.umd.edu/sites/default/files/files/TransformingHealth.pdf>
- Urban Health Research and Practice. (2013). *The Massachusetts prevention and wellness trust: An innovative approach to prevention as a component of health care reform*. As of December 15, 2019: <https://www.northeastern.edu/iuhrp/wp-content/uploads/2013/12/PreventionTrustFinalReport.pdf>
- Vásquez-Vera, H., Palència, L., Magna, I., Mena, C., Neira, J., & Borrell, C. (2017). The threat of home eviction and its effects on health through the equity lens: A systematic review. *Social Science & Medicine*, 175, 199-208.
- Vaughan, C., A., Collins, R., Ghosh-Dastidar, M., Beckman, R., & Dubowitz, T. (2017). Does where you shop or who you are predict what you eat?: The role of stores and individual characteristics in dietary intake. *Preventive Medicine*, 100, 10-16.
- VCU Center on Society and Health for the Metropolitan Washington Council of Governments. (2018). *Uneven opportunities: How conditions for wellness vary across the metropolitan Washington region*. As of January 10, 2020: <https://www.mwcog.org/healthindicatorsreport/>
- Vermont Agency of Transportation. (2019). *Better connections program*. As of December 15, 2019: <https://vtrans.vermont.gov/planning/projects-programs/better-connections>
- Vermont Department of Health. (2018a). *Creating cross-sector action and accountability for health in Vermont: Guidance from a rural state*. As of December 15, 2019: https://www.healthvermont.gov/sites/default/files/documents/pdf/ADM_CoH_Guide.pdf
- Vermont Department of Health. (2018b). *Health in all policies scorecard*. As of June 23, 2020: <https://www.healthvermont.gov/about/performance/health-all-policies-scorecard>
- Walker, R. J., Gebregziabher, M., Martin-Harris, B., & Egede, L. E. (2014). Independent effects of socioeconomic and psychological social determinants of health on self-care and outcomes in Type 2 diabetes. *General Hospital Psychiatry*, 36(6), 662-668.
- Ward, B., W., Schiller, J., S., & Goodman, R., A. (2014). Multiple chronic conditions among U.S. adults: A 2012 update. *Preventing Chronic Disease*, 11(E62).
- Washington State Department of Health and Human Services. (2014). *Digital states survey 2014*. As of December 15, 2019: <https://ocio-website-files.s3-us-west-2.amazonaws.com/Digital-States-Survey-PRISM-Predictive-Risk-App.pdf>
- Weitzman, M., Baten, A., Rosenthal, D., G., Hoshino, R., Tohn, E., & Jacobs, D., E. (2013). Housing and child health. *Current Problems in Pediatric and Adolescent Health Care*, 43(8), 187-224.

Wilper, A., P., Woolhandler, S., Boyd, J., W., Lasser, K., E., McCormick, D., Bor, D., H., & Himmelstein, D., U. (2009). The health and health care of U.S. prisoners: Results of a nationwide survey. *American Journal of Public Health, 99*(4), 666-672.

Young, R., F., & Severson, R., K. (2005). Breast cancer screening barriers and mammography completion in older minority women. *Breast Cancer Research and Treatment, 89*(2), 111-118.

Zallman, L., Himmelstein, D., H., Woolhandler, S., Bor, D., H., Ayanian, J., Z., Wilper, A., P., & McCormick, D. (2013). Undiagnosed and uncontrolled hypertension and hyperlipidemia among immigrants in the U.S. *Journal of Immigrant and Minority Health, 15*(5), 858-865.

Zimmerman, E., D., Woolf, S., H., & Haley, A. (2015). *Understanding the relationship between education and health: A review of evidence and examination of community perspectives*. In Robert M. Kaplan, Michael L. Spittel, Daryn H. David, eds., *Population health: behavioral and social science insights*, Rockville, MD: Agency for Healthcare Research and Quality, AHRQ Publication No. 15-0002.

Zoellner, J., You, W., Connell, C., Smith-Ray, R. L., Allen, K., Tucker, K. L., . . . Estabrooks, P. (2011). Health literacy is associated with healthy eating index scores and sugar-sweetened beverage intake: findings from the rural Lower Mississippi Delta. *Journal of the American Dietetic Association, 111*(7), 1012-1020.

Appendix A. Overview of Focus Groups and Key Informant Interviews

Overview

The RAND project team collected primary stakeholder perspective data using three approaches: a town hall meeting, focus groups, and interviews. These approaches offered an opportunity for residents and employees of County departments and non-governmental organizations to share their perspectives and subjective experiences. RAND's Human Subjects Protection Committee approved this research. The following describes our approach to data collection and analysis.

Approach

The **town hall** was held on June 11, 2019, at the County Administration Building. The town hall was open to the general public and served as a platform for dialogue. The town hall was advertised through newspaper postings and online advertisement. No monetary incentive was provided for attendance. Approximately 70 people attended the town hall. The format of the town hall meeting was as follows. RAND gave an overview of the ongoing health needs assessment and elicited opinions from residents about health and well-being in the County using a semi-structured protocol about health and human services in the County. Attendees also were invited to complete a brief, anonymous demographic survey that asked about their age, race/ethnicity, gender and ZIP code (Table A.1). Using an interactive, online polling system, attendees were invited to anonymously share their opinions on a series of statements related to health and well-being. Responses to those close-ended survey items were collected using a Likert-type scale (strongly agree, agree, neutral, disagree, strongly disagree, don't know) and used an online polling system, which enabled attendees to immediately see aggregated responses as part of the discussion. Prompts included the following:

- There is good health care in my community (26 percent agree or strongly agree)
- My community is a good place to raise children (40 percent agree or strongly agree)
- My community is a good place to grow old (34 percent agree or strongly agree)
- There are good jobs in my community (18 percent agree or strongly agree)
- My community is a safe place to live (46 percent agree or strongly agree)

- There are good schools in my community (17 percent agree or strongly agree)
- My community has good laws and policies that keep people healthy (7 percent agree or strongly agree)

After this polling was completed, attendees were invited to share comments orally. Attendees who wished to share public comments with the Council were asked to introduce themselves, and the individuals who spoke at the town hall meeting included individual residents as well as individuals and residents representing specific organizations. A notetaker captured comments, and the session was audio-recorded for the purposes of the research, as well as digitally recorded by the county.

Following the Town Hall meeting, an online survey was used to obtain comments from residents who were unable to attend the meeting. Residents were invited to respond to the aforementioned prompts and asked to respond to the following open-ended question: Thinking about the broader issue of health, which includes your physical, mental and social health. What can the County do to improve wellbeing? Please try to be as concrete as possible and share with us some specific ideas you have. Demographics of individuals responding to the online survey are listed in Table A.1.

Table A.1.
Demographics of Town Hall and Focus Group Participants

	Town Hall	Online Survey	Focus Group*
Total participants	70	57	24
Female, %	72.9	**	50.0
Race/ethnicity***			
Black, non-Hispanic, %	61.4	36.8	66.7
White, non-Hispanic, %	18.6	59.6	29.2
Hispanic, %	14.3	3.5	0.0
Asian, %	2.9	1.8	4.2
Native Hawaiian or other Pacific Islander	0.0	1.8	0.0
Other, %	2.9	0.0	0.0
Age Group, %			
17 or under	0.0	0.0	0.0
18 to 24	5.7	0.0	0.0
25 to 34	10.0	7.0	8.3
35 to 44	12.9	8.8	4.2
45 to 54	22.9	5.3	12.5
55 to 64	28.6	21.1	37.5
65 to 74	14.3	42.1	20.8
75 or over	5.7	15.8	16.7

NOTES: *Reflects demographics from the North, Central, and South regional focus groups. A demographic survey was not distributed to participants of the youth focus group. **Gender was not accurately collected for the online survey. ***Percentages for the online survey sum to more than 100% because respondents could select more than one race.

Additionally, four **focus groups** composed of County residents were conducted to obtain information about residents' opinions and experiences regarding health and human services in the County. The focus groups were conducted in English. The composition of these focus groups is described in Table A.1. Three focus groups were conducted in order to obtain information about specific regional needs in the Central, North, and South County regions. Participants were recruited by a county government representative through an existing county relationship. Participants were served dinner and provided with a \$25 gift card. Focus groups lasted approximately 90 minutes and were audio-recorded after consent was obtained. A notetaker actively took notes, which were supplemented by the audio recording. The protocol used for the protocols, which details the questions asked, is provided below. The protocol was semi-structured to allow for flexibility to pursue areas of interest that emerged in the discussion. The moderator also was able to explain any questions that were unclear or to give examples to help participants understand and respond. The fourth focus group was conducted to learn more about the needs of adolescents and young adults in the County. These youth were participating in County government internships and were invited to attend the focus group as part of their internship program. No monetary incentive was provided. The protocol for the youth focus group was similar to what was used in the regional focus groups, but was adapted to circumstances and experiences of adolescents.

Table A.2.
Description of Focus Groups

Description of Focus Group	Date	Number of Attendees
Central County residents	June 27, 2019	11
North County residents	July 10, 2019	8
South County residents	July 30, 2019	5
Adolescents and young adults	July 23, 2019	12

RAND project staff also conducted 23 **interviews** with key informants knowledgeable about the health and human services needs of County residents. This included 15 interviews with individuals working for government agencies and 8 interviews with individuals working with nongovernmental and nonprofit organizations serving County residents. Interviewees were in leadership or staff roles and were familiar with health and human services needs of County residents and their organization's role in meeting these needs. Key informants were identified and recruited with assistance from County Council staff. Key informants represented the following organizations:

- The Arc
- CASA (Court Appointed Special Advocates)
- Community Youth Advance
- Employ Prince George's County
- Food Equity Council: Prince George's County
- Maryland-National Capital Park and Planning
- Mission of Love
- Prince George's Advocates for Community Based Transit
- Prince George's County Department of Correction
- Prince George's County Department of Family Services
- Prince George's County Health Department

- Prince George's County Department of Housing and Community Development
- Prince George's County Department of Parks and Recreation
- Prince George's County Department of Public Works and Transportation
- Prince George's County Department of the Environment
- Prince George's County Department of Social Services
- Prince George's County Economic Development Corporation
- Prince George's County EMS/Fire Department
- Prince George's County Police Department
- Prince George's County Public Schools
- Prince George's Health Equity Behavioral Health Advisory Group
- Prince George's Healthcare Action Coalition Health Equity Workgroup
- Prince George's Senior Provider Network

Interviews lasted approximately one hour. No incentive was provided. Interviews were audio-recorded if the participant consented. Nearly all interviews were conducted by a single researcher speaking with a single respondent. In two cases, a researcher and notetaker spoke with a group of key informants who were all part of the same organization. The interview protocol asked informants if and how their organization can impact health, how they engaged in partnerships, and their recommendations for how the County can improve health and well-being. Questions were tailored based on whether or not the informant worked for a County agency. The full protocol can be found below.

Analytic Approach

We combined together all primary data from the Town Hall meeting, focus groups, and key informant interviews and analyzed it collectively using a thematic approach. To identify key themes that emerged from these primary data collection efforts, the study team reviewed notes, and categorized key themes across all data collection efforts. Themes were identified based on frequency and relative importance (i.e., if the stakeholder flagged it as important) and also when identified by multiple types of stakeholders (e.g., residents and individuals working for County agencies or community-based organizations). Resulting themes were reviewed by at least two study team members to ensure the team agreed on that priority identification.

Limitations

While we have already noted several limitations within the body of the report, below we highlight limitations relevant to our primary data collection and analysis. First, we attempted to obtain feedback from a diverse and representative set of stakeholders through primary data collection via a town hall meeting, three geographically distributed resident focus groups, one adolescent and young adult focus group, and interviews with 28 key stakeholders, including 18 individuals working for County agencies and 10 individuals working with nonprofit and nongovernmental organizations serving County residents. Second, some populations are notoriously hard-to-reach, even with the best efforts (e.g., individuals experiencing homelessness and undocumented immigrants). Relatedly, the individuals who attend focus groups and town hall meetings may represent more engaged residents who may or may not share the same opinions and beliefs as other residents who did not participate in these events. Next, we recognize that the concepts discussed during these primary data collection activities could have been new concepts and not easily understood. Therefore, we intentionally began all data collection efforts by introducing and defining our key topics of interest and when possible (i.e., during interviews and focus groups) encouraging and responding to all questions. Finally, given scope and resources, these focus groups and interviews were conducted in English, though if a trans-

lator was needed, accommodations could be made. Translators were available and used at the Town Hall meeting (Spanish translators and American Sign Language translators). Given these limitations, our qualitative data must be considered a sample, and does not necessarily capture opinions from all relevant stakeholders.

Moderator's Guide for Focus Groups

1. Introduce goal of report and goal of focus group

The RAND Corporation, a *nonprofit institution that helps improve decision-making through research and analysis*, is conducting a research study with Prince George's County in order to conduct a countywide community health and human service needs assessment. As a resident, we want to learn more from you about what the County can do to improve health care and social services in the County and to better serve the needs of residents. In this discussion, we want to get your perspective on priority health and social service issues in the County – and, importantly, your thoughts on the program and policy solutions to these issues.

2. Obtain oral consent

Your participation in this focus group is entirely voluntary. You can leave at any time or choose not to participate. The discussion that we have is completely confidential. We ask that you respect the opinions of others in the group. We will not identify you by name in any report. We will not share your individual responses with County staff or anyone else outside the project and we will not identify any individuals by name in our study reports. Your responses will be combined with others and reported in a group. If quotations are used in any written reports, they will be included only for illustrative purposes and will not be connected to any individual. At the end of the study, we will destroy any information that identifies you. The group will take approximately 1.5 hours. You will receive a \$25 gift card when you leave the focus group. There are no specific benefits or risks associated with participation in this study. With your permission, we would like to record the focus groups on audiotape. At the end of the study we will destroy the tapes. Is it all right if we audiotape this focus group? If you have questions about your rights as a research participant or need to report a research-related injury or concern, you can contact RAND's Human Subjects Protection Committee.

3. Go through slides providing description of social determinants of health, health disparities, and health equity.

For this evening's discussion, we want you to think broadly about health. Please think about health as more than just being well or sick, but also about having good mental, social and physical health. Many things impact health, including having a safe neighborhood in which you can exercise, healthy places to buy food and a clean environment. We would like to find out more from you about what types of things you think will improve your health. To help you think about this concept of health, we want to start by sharing with you a few slides:

SLIDES 1 and 2: This first slide shows how we think about health from a *Health in All Policies* perspective. This involves agencies integrating health in all policy decisions. Not just the health department and public health agencies-but all agencies-such as in parks and plan-

ning, public safety and transportation. So simply, *Health in All Policies* means we advocate and pass policies that support healthy communities – from where we live, work, eat, and play

SLIDE 3: Why is this important? Clinical care or access to a doctor is a small component of what it takes to live your best, healthy life. Social and environmental conditions, which may influence our behaviors, play a larger role. We know what people tend to be healthier when they have good jobs with livable wages, access to healthy foods and affordable transportation, as well as meaningful relationships and social connections. During our time together, I want you to reflect on the condition of your immediate community and think about what can be done to improve the well-being of you and your neighbors.

SLIDE 4: And as we pursue the conversation, please think about the important role of achieving equity as a means of ensuring that resources are distributed according to need. For example, some populations or communities may need more resources than others.

SLIDE 5: A prior evaluation of Prince George's County showed that social determinants of health, obesity, mental health and cancer were priority areas of importance for the County to focus to improve the health of its residents. We want to talk more today about some of the ways to address the concerns of Prince George's County residents, thinking about how we can improve health from all policies.

4. Discussion questions for the group (intend 50 minutes for discussion)

Part I: Discussion of Health Needs/Barriers

a. Quality of Life

- i. Let's start by thinking about a few questions that offer an indication of quality of life. For example, is my community a good place to raise children? A good place to grow old? Are there policies and laws that protect my health and the health of my neighbors? How do you feel about the quality of life in your community?
- ii. What are the biggest barriers/obstacles to having a good quality of life in your community?

b. Community Resources Needs

- i. Healthy communities strive to have the appropriate level of services and resources to meet the current and future needs of residents. As you think about your community, what do you think is most important? How well do you think your community meets the services and resource needs? [Probe as needed: access to safe spaces to exercise and play, healthy food alternatives.].
- ii. What are the biggest barriers/obstacles to having these needs met?

c. Health priorities

- i. An appropriate level of resources and services should be allocated to health conditions that affect communities the most. Based on your experiences and observations, which conditions should be a priority? Please think broadly to include both physical health as well as mental health conditions.
- ii. What are the biggest barriers/obstacles to having the resources need to care for important health conditions in your community? (probe as needed access to comfortable spaces for care, access to providers in your community)

Part II: Recommendations for Prince George's County

- a. Please think about the broader issue of health, which includes your physical, mental and social health. Try to think of some of the services related to some of the issues we discussed earlier? What can the County do to improve wellbeing? Please try to be as concrete as possible and share with us some specific ideas you have. [*Probe as needed: better spaces to get health care, healthy food alternatives, safer places to exercise, job training, educational opportunities. Encourage discussants to think about all domains discussed in Part 1.*]

Part III: Prioritization of Recommendations

- a. If you had to prioritize these recommendations, what are your top three or five? Ask participants to rank on board or flip chart if available, then lead discussion of why they chose these three or five.
- b. Thinking about the broader issue of health and services that can affect your health. Of those recommendations that you ranked, which do you think would improve those services in your community/area within the County?

Key Informant Interview Protocol

Oral Consent

The RAND Corporation, a **nonprofit institution that helps improve decision-making through research and analysis**, is working with Prince George's County to conduct a countywide community health and human service needs assessment. As a key stakeholder in the provision of services, we want to learn more from you about what the County can do to improve health in the County and to better serve the needs of residents.

In this discussion, we want to get your perspective on priority health issues in the County – and, importantly, your thoughts on the program and policy solutions to these issues. We also want to get your perspectives on how agencies and organizations can work together to improve health.

Your participation in this interview is entirely voluntary. You can leave at any time or choose not to answer any questions. The discussion that we have is completely confidential.

Your responses will be combined with others and reported in a group. If quotations are used in any written reports, they will be included only for illustrative purposes and will not be connected to any individual. At the end of the study will destroy any information that identifies you.

The interview will take approximately 1 hour.

With your permission, we would like to record the interviews on audiotape. At the end of the study we will destroy the tapes. Is it all right if we audiotape this interview?

- If you have questions about your rights as a research participant or need to report a research-related injury or concern, you can contact RAND's Human Subjects Protection Committee toll-free at (866) 697-5620 or by emailing hspcinfo@rand.org. If possible, when you contact the Committee, please reference Study #2019-0129.

- Any questions regarding our discussion or this research study can be directed to:
 - Janice Blanchard, Study co-investigator: jblanch@rand.org; 202-257-4707
 - Anita Chandra, Study PI: chandra@rand.org; 703-413-1100 x5323
 - Ashley Kranz, Study co-PI: akranz@rand.org; 703-413-1100 x5616
- Do you agree to participate in the group?
 - If yes, continue with protocol.
 - If no: “That is fine. Thank you for your time, and you may leave.”

Interview Protocol

Part I: Overview of health and human service needs in Prince George's County

We realize that you represent a unique organization with a specific targeted population. Our goal for this project is to think about how health can be integrated in all policies. Thinking about health in a broader sense-encompassing physical, mental and social health-we want to explore ways in which agencies can work together to improve the health of County residents.

To help you think about health and human service needs, we would like to get your thoughts on the slides we sent.

Discussion questions

1. Looking at the slides, what domains do you feel that your agency can impact the most?
2. What are the human service needs that your agency addresses? Specifically, what human service needs does your agency address that impact some of the domains listed in the report? (Note tailor based on the Agency)
3. How do you feel these human service needs impact health?
4. What have been the biggest barriers faced by your agency in improving these human service needs? Probe – funding streams, resource allocation, political biases, county norms
5. Are there particular targeted populations that have been most challenging?
6. Considering population trends and the diversity of the county's various residents based on geographic location (North, South, Central), are any areas that have been more challenging than others?
7. Are there any strategies implemented by your agency to improve human services that you feel have been particularly successful? Please cite specific examples.

Part II: Partnerships

Discussion questions

1. How well does your agency work with the Health Department to improve the health of the County?
2. How well does your agency work with other agencies, both governmental and non-governmental, to improve human and social services in the County? How do these collaborations affect the health of County residents?

3. Are there any examples you can cite in which partnerships with other agencies (governmental or non-governmental) have been particularly successful? Please cite specific examples.
4. What barriers do you face in promoting interagency cooperation to improve human services that may impact health?
5. What barriers do you face in working with non-governmental agencies to improve human services that may impact health?
6. In what ways can your agency partner with other County agencies to improve human services that may impact health?
7. In what ways can your agency partner with non-governmental organizations to improve human services that may impact health?
8. What can County leadership do to facilitate these partnerships?

Part III: Recommendations for the County

Now, we would like to get your recommendations on what Prince George's County Officials can do to improve health for the County? Please try to think as concretely as possible.

Discussion questions

1. What can your agency do to improve human services that impact health among the population you serve? Please think of some specific ideas you have that your agency can implement.
2. What would you need to implement these ideas? From the County? From other agencies? From non-governmental organizations

Part IV: Prioritization of Recommendations

1. If you had to prioritize these recommendations, what are your top 3 or 5? [Ask participants to rank on their own sheet of paper first, then lead discussion of why they chose these 3 or 5 on board or flip chart to come up with a consensus.]
2. What do you think would have the most impact on health in the County as a whole? Why?

Any other comments or recommendations of stakeholders whom we should interview?

Appendix B. Data Sources

Table B.1 provides a description of data sources used in this report.

Table B.1.
Description of Data Sources

Data source	Time Period	Description
American Community Survey 5-Year Summary File	2014–2018	The 5-year Summary Files provide information on demographics, health insurance, and educational attainment at the county, tract, and ZCTA level. See text below the table for additional information about generating Councilmanic District values from these data.
American Community Survey 1-Year Summary File	2009–2018	The 1-year Summary Files were used to generate time series estimates at the county level. The 1-year summary files do not generate estimates for geographies with a population less than 65,000, such as tracts and ZCTAs.
American Community Survey 1-Year Public Use Microdata Sample	2018	The 1-year Public Use Microdata Sample (PUMS) files were used to generate characteristics for the noncitizen population. The Summary Files do not generate many tables by citizenship, so we rely on the PUMS to identify individuals and their characteristics.
American Lung Association, State of the Air	2019	The American Lung Association compiles and analyzes data from official air monitors. Available at https://www.lung.org/our-initiatives/healthy-air/sota/ . Accessed September 2019.
Behavioral Risk Factor Surveillance System	2016 & 2017	The BRFSS is an annual survey conducted by the Centers for Disease Control and Prevention (CDC) in conjunction with states. The survey collects data on a number of factors, ranging from sociodemographic characteristics and health insurance to disease burden and health care behavior. BRFSS surveys are conducted by telephone, for adults age 18 and older (one per household). Data were obtained from the Maryland Department of Health Dataset Query System (MD-IBIS). All BRFSS results were age-adjusted to allow for comparisons across counties.
CDC National Center for Health Statistics, CDC WONDER Online Database	2008–2017	National Center for Health Statistics compiles and disseminates public health data for epidemiologic research through the CDC WONDER online database. Data covers natality, cancer, environment, mortality, vaccines, and population. Available at https://wonder.cdc.gov . Leading causes of death data (age-adjusted mortality rate per 100,000) derived from the Multiple Causes of Death, 1999 – 2017 dataset.

Data source	Time Period	Description
CDC National Environmental Public Health Tracking Network	2016	Provided information on the number extreme heat days and number of extreme precipitation days. Available at https://ephrtracking.cdc.gov/DataExplorer . Extreme heat days are days in which the daily maximum temperature exceeded the 90th percentile of the range of daily maximum temperatures for Prince George's County for summer months across all years from 1979 to 2016. Extreme precipitation days are days in which the daily precipitation exceeded the 90th percentile of the range of daily precipitation for Prince George's County across all years from 1979 to 2016.
EMS incidents	2017 and 2018	EMS incidents responded to by Prince George's County Fire and Emergency Medical Services Department during 2017 and 2018. Available by incident type and with geographic information (address and/or box). See text below the table for additional information about geocoding of these data.
Food Access Research Atlas, Economic Research Service (ERS), U.S. Department of Agriculture (USDA).	2010-2015	Data are from the 2017 report, Low-Income and Low-Supermarket-Access Census Tracts, 2010-2015. This report updates estimates of low-income and low-supermarket-access census tracts (as found in ERS' Food Access Research Atlas) using a 2015 directory of supermarkets, 2010 Decennial Census data on population and subpopulation characteristics, and 2010-2014 American Community Survey data on household vehicle access and family income. Available at https://www.ers.usda.gov/data-products/food-access-research-atlas/ .
Health literacy	2014–2018	Estimated probability of having above basic health literacy (i.e., intermediate or proficient) using data from the 2014-2018 American Community Survey and the Health Literacy Component of the 2003 National Assessment of Adult Literacy, an in person assessment of English language literacy among a nationally representative sample of U.S. adults age 18 and older. NOTES: Full methods describing the modeling approach are included the 2010 report by Lurie and colleagues (Lurie et al., 2010) and available at (http://healthliteracymap.unc.edu).
Healthy People 2020	2015–2017	Interactive tool to explore data related to the Healthy People 2020 objectives. The present report utilized data on cancer incidence. Available at https://www.healthypeople.gov .
Hospital and ED discharge data	2017	Provided information on hospital discharges and ED visits for Prince George's County residents obtaining care in Maryland and the District of Columbia. Maryland data was obtained from the Maryland Health Services Cost Review Commission. DC data was obtained from the DC Hospital Association. See text below the table for additional information about geocoding of these data.
Local Area Unemployment Statistics	2009–2018	Annual, unadjusted unemployment rates for state and county were taken from the Bureau of Labor Statistics' Local Area Unemployment Statistics (LAUS).
Maryland Department of Health, Annual Cancer Report	2005–2017	Annual reports on cancer incidence, cancer mortality, surveys of cancer risk, and cancer screening from the Maryland Department of Health.
Maryland Department of the Environment, Annual Childhood Blood Lead Surveillance Reports	2009–2018	The percentage of children in Prince George's County with blood lead levels ≥ 10 $\mu\text{g}/\text{dL}$ was calculated by dividing the total number of cases of blood lead levels ≥ 10 $\mu\text{g}/\text{dL}$ in the County by the total number of children tested in the County. These data were obtained from the Childhood Blood Lead Surveillance In Maryland Annual Reports for each year, 2009 – 2018. Reports are found on the Maryland Department of the Environment website at https://mde.maryland.gov/programs/land/leadpoisoningprevention/pages/healthcare.aspx
Maryland Food Stores	2017–2018	This data was obtained from the Johns Hopkins University Center for A Livable Future. This data was compiled by combing two datasets, the USDA SNAP Retail Locator (data obtained in 2017) and ReferenceUSA (data obtained in 2018).

Data source	Time Period	Description
Maryland Vital Statistics	2008–2017	Compiled by the Maryland State Department of Health and Mental Hygiene (DHMH), these reports estimate such statistics on such indicators as adult (years 1999–2000 and 2004–2006) and infant mortality rates and low-birth weights (years 2000–2005), using data on resident births, resident deaths, net internal immigration, internal migration, and net movement of the U.S. armed forces.
Maryland Youth Risk Behavior Survey and Youth Tobacco Survey	2013–2016	Survey developed by the Centers for Disease Control and Prevention (CDC) to assess risk behavior among American youth. Collects data on various health behaviors. Available for the state and every county in 2013, 2014, and 2016. Data were obtained from the Maryland Department of Health Dataset Query System (MD-IBIS).
Maryland’s Open Data Portal	2007–2018	Geographic data supplied by the Maryland Department of Information Technology. Data available at sub-county ranking. Present report exhibited violent and property crime by sub-county jurisdictions. Accessed September 2019.
MDH Maryland SHIP	2015–2017	The Maryland State Health Improvement Process (MD SHIP) captures 39 health-related measures. The present report utilized data on cancer incidence.
National Center for Health Statistics, final natality data	2014–2016	National Vital Statistics System spans data related to childbirth, including prenatal, delivery, and perinatal metrics. Accessed September 2019.
PGCPS Office of Special Education and Student Services	2019	Data provided directly by PGCPS in September 2019 regarding the health and social service needs of students.
Park Data	2019	County park data was obtained from the Maryland-National Capital Park and Planning Commission and included all master parks in Prince George’s County. National park data was obtained from the National Park Service at https://public-nps.opendata.arcgis.com/datasets/national-park-service-park-unit-boundaries .
Point-in-Time Estimates of Homelessness	2007–2018	County level counts of homeless were obtained from the U.S. Department of Housing and Urban Development “Point-in-Time Estimates by Continuums of Care” as included in the Annual Homeless Assessment Report to Congress. Available at https://www.hudexchange.info/resource/5783/2018-ahar-part-1-pit-estimates-of-homelessness-in-the-us/ . Available December 2018. Accessed September 19, 2019.
PRAMS	2005–2013	The Pregnancy Risk Assessment Monitoring System (PRAMS) data are limited only to births within Maryland and does not include information about births to Maryland residents in other states or DC. Available at https://phpa.health.maryland.gov/mch/Documents/CountyBrief_dec2015.pdf . Published December 2015. Accessed September 22, 2019.
Prince George’s County and Maryland School Report Card	2017–2019	These data provide information about on school enrollment, vaccination rates, educational attainment, and proficiency rates. Obtained for Prince George’s County and Maryland. Accessed September 2019. Available at https://msp2018.msde.maryland.gov .
Prince George’s County Department of Social Services	2016–2019	Data on resident engagement with social services in Prince George’s County, provided by DSS in August 2019.
Prince George’s County Open Performance Website	2019	Metrics obtained from Prince George’s County Department of Family Services budget books.
RWJF County Health Rankings	2009–2019	The Robert Wood Johnson Foundation developed a model to rank all counties within each state. The County Health Rankings conglomerates measures from a variety of public data sources, which are updated when new measurements are released. Data from years released prior to the yearly rankings are noted under each table. Data available at https://www.countyhealthrankings.org/explore-health-rankings . Accessed June 2019.

Data source	Time Period	Description
Social Vulnerability Index	2016	Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. Social Vulnerability Index 2016 Database Maryland. data-and-tools-download.html . [Fix text & make this a link] Accessed on September 26, 2019.
U.S. Census Bureau, County Business Patterns	2016	Provided information on the number of recreation and fitness facilities and the number of membership associations in the County and throughout the state.
USDA, Economic Research Service, Estimate of Distance to Supermarkets	2010	Ver Ploeg, Michele, Vince Breneman, Paula Dutko, Ryan Williams, Samantha Snyder, Chris Dicken, and Phil Kaufman. Access to Affordable and Nutritious Food: Updated Estimates of Distance to Supermarkets Using 2010 Data, ERR-143, U.S. Department of Agriculture, Economic Research Service, November 2012.
U.S. Environmental Protection Agency, National Walkability Index	2017	Each block group was assigned four ranked scores, one for each of the variables above. To score block groups, the block groups were placed into 20 quantiles by variable value. The block groups were then assigned a rank from 1 to 20 depending upon their quantile position. A ranked score of 1 was assigned to the block groups with the lowest relative values influencing walking, and a ranked score of 20 was assigned to the block groups with the highest relative values influencing walking, with intermediate scores in between. The ranked scores were then weighted as follows: 1/3 to each of the three categories of street intersection density, land use mix, and proximity to transit; the land use mix category was divided into two to account for the two different techniques of measurement; employment mix and employment and household mix were each weighted by 1/6.
Metropolitan Washington Council of Governments	2019	County level counts of people experiencing homelessness for 2019 were obtained from the report <i>Homelessness in Metropolitan Washington: Results and Analysis from the Annual Point-in-time (PIT) Count of Persons Experiencing Homelessness</i> .
Unintentional Drug- and Alcohol-Related Deaths in Maryland	2007–2018 up to March 2019	Data available from the Maryland Department of Health. Data available from 2007 up to the first quarter of 2019. Includes deaths that were the result of recent ingestion or exposure to alcohol or another type of drug, including heroin, cocaine, prescription opioids, benzodiazepines, and other prescribed and unprescribed drugs.

Overview of Analytic Decisions

For some data sources, we had to make decisions about how to aggregate data. We describe those decisions below.

American Community Survey

We use the 2014–2018 American Community Survey 5-Year Summary Files as our primary source for reporting various demographic measures for residents of Prince George's County. Additionally, we use population counts by age and race/ethnicity to generate rates and age-adjust. Most measures are calculated at the county, Zip Code Tabulation Area (ZCTA), and Census tract level.

In addition to using the 5-Year Summary File, we use the 1-Year Summary Files from 2009–2018 to report on trends. Due to the smaller sample size, the 1-Year Summary Files do not report on any geographic region with a population smaller than 65,000. As such, we are not able to use the files for generate any estimates at the tract or ZCTA level. We could how-

ever, use these files to generate county level estimates for all of our measures. We decided to use the 5-Year pooled files instead due to the larger sample size and for consistency with the sub-county measures.

To generate estimates for the nine County councilmanic districts, we follow the approach taken in Hendey and Posey (2018). To generate estimates for the nine County councilmanic districts, we follow the approach taken in Hendey and Posey (2018). As a first step we use the 2010 Decennial Census Maryland geography file at the Census block level, which has block, tract, and ZCTA identifiers along with a 2010 population estimate. By construction, each of block is contained uniquely in a tract and in a ZCTA. To add district information to this block level file, we used a spatial join in ESRI ArcMap 10.7 between blocks and councilmanic districts.¹ Almost all census blocks are uniquely contained within a district, but a few edge cases were split between districts. For these, we used an intersect between the two layers to calculate the total area of the block that is contained by each district and assigned the block to district with the largest percent of the area.

We used this block level file to generate a population weighted estimate of the percent of each tract that is contained within each district. This crosswalk is then used to distribute the tract level population into each district.

Finally, we also use the 1-Year Public Use Microdata Sample (PUMS) files for 2018 for describing the noncitizen population. The existing tables in the Summary Files do not provide much information stratified by citizenship status. So instead, we rely on flagging individuals in the PUMS files and describing them. We do not rely on the PUMS for other measures due to the smaller sample size in these files.

Unemployment and the Working Poor

We use two different sources for unemployment data. For Maryland and counties, we use the Bureau of Labor Statistics' (BLS) Local Area Unemployment Statistics (LAUS). The BLS does not generate estimates at a lower level, so for district level estimates we use the ACS. We generally rely on the LAUS because the levels of the ACS estimates are potentially problematic. ACS unemployment rates are consistently higher than BLS number (<https://www.bls.gov/lau/acsqa.htm#Q06>). Also, the 5-year pooling averages out fluctuations in the business cycle. However, the relative levels should still highlight structural differences between districts.

Following BLS methodology (<https://www.bls.gov/opub/reports/working-poor/2017/home.htm>) we define the working-poor rate as the number of individuals in the labor force whose incomes still fell below the official poverty level, as a percentage of all people who were in the labor force. The labor force is defined as those who are currently employed and those who are unemployed and seeking work. The two sources differ based on the reference period used to define employment status. The BLS defines employment status based on a majority of the year (27 weeks), whereas the ACS defines based on a reference week – with unemployment determined by an active job search during the four weeks prior to the reference week.

CDC WONDER Data on Mortality

We used CDC WONDER's dataset on mortality (Multiple Cause of Death, 1999–2017) to derive the leading causes of death. Managed and updated by the National Center for Health

¹ We use 2010 Census block shapefile downloaded from Census TIGER/Line along with the shapefile for the 2014 Councilmanic Districts downloaded from Prince George's Planning Department GIS Open Data Portal.

Statistics, CDC WONDER is a comprehensive database designed to promote informative public health policy and decision-making. We outline leading causes of death in Chapter Four to support our analysis of health outcomes. In our tables and figures, we use colloquial terms to describe ICD-10 defined diagnoses. Table B.2. below outlines our terminology.

Table B.2.
ICD-10 Codes and Terminology Used for Leading Causes of Death

Terminology Used	ICD-10 Diagnosis	ICD-10 codes
Cancer (malignant)	Malignant neoplasms	C00 – C97
Heart disease	Diseases of heart	I00 – I09, I11, I13, I20 – I51
Stroke	Cerebrovascular disease	I60 – I69
Accidents	Accidents (unintentional injury)	V01 – X59, Y85 – Y86
Diabetes	Diabetes mellitus	E10 – E14
Chronic lower respiratory diseases	Chronic lower respiratory diseases	J40 – J47
Nephritis	Nephritis, nephrotic syndrome and nephrosis	N00 – N07, N17 – N19, N25 – N27
Alzheimer's disease	Alzheimer's disease	G30
Septicemia	Septicemia	A40 – A41
Hypertension	Essential hypertension and hypertensive renal disease	I10, I12, I15
Influenza and pneumonia	Influenza and pneumonia	J09 – J18
Homicide	Assault (homicide)	*U01 – *U02, X85 – Y09, Y87.1
Liver disease	Chronic liver disease and cirrhosis	K70, K73 – K74
Suicide	Intentional self-harm (suicide)	*U03, X60 – X84, Y87.0
Perinatal conditions	Certain conditions originating in the perinatal period	P00 – P96

Hospital and ED Discharge Data

Discharge data have an indicator for the ZIP code of residence of the patient. To report rates at the district level, we use two crosswalks. The first is to crosswalk zip codes into ZCTAs.² These aggregates unique zip codes like P.O. Boxes and ZIP codes assigned to a building or organization into a larger geographic area. Additionally, it allows us to match the ZIP code level data to ZCTA level population estimates for generating rates. The second crosswalk then distributes the ZCTA level estimates to districts. This crosswalk is generated using the same block level file used to distribute tract level population into districts.

To generate our rates, we divide all discharge counts by the population estimates generated from the 2013–2017 ACS. All rates are age-adjusted to the 2000 U.S. standard population.

For flagging conditions, we use the ICD-10 primary diagnosis code or the Clinical Classifications Software (CCS)³ code applied to the primary diagnosis, as noted in Tables B.3 and B.4.

² <https://www.udsmapper.org/zcta-crosswalk.cfm>

³ <https://www.hcup-us.ahrq.gov/toolssoftware/ccs10/ccs10.jsp>

Table B.3.
ICD-10 Codes Used to Identify Conditions in ED and Hospital Discharge Data

Condition	ICD-10 Code	Code Description
Diabetes	E08	Diabetes mellitus due to underlying condition
	E09	Drug or chemical induced diabetes mellitus
	E10	Type 1 diabetes mellitus
	E11	Type 2 diabetes mellitus
	E13	Other specified diabetes mellitus
Heart disease	I01	Rheumatic fever with heart involvement
	I05	Rheumatic mitral valve diseases
	I06	Rheumatic aortic valve diseases
	I07	Rheumatic tricuspid valve diseases
	I08	Multiple valve diseases
	I09	Other rheumatic heart diseases
	I11	Hypertensive heart disease
	I13	Hypertensive heart and chronic kidney disease
	I20-I25	Ischemic heart diseases
	I26-I28	Pulmonary heart disease and diseases of pulmonary circulation
I30-I51	Other forms of heart disease	
Hypertension	I10	Essential (primary) hypertension
	I11	Hypertensive heart disease
	I12	Hypertensive chronic kidney disease
	I13	Hypertensive heart and chronic kidney disease
	I15	Secondary hypertension
	I16	Hypertensive crisis
Non-traumatic dental care*	K08.81	Primary occlusal trauma
	K08.82	Secondary occlusal trauma
	K08.89	Other specified disorders of teeth and supporting structures

NOTES: For non-traumatic dental care, we used guidance from Manz (2017). Due to a recent change in ICD-10 codes, we replaced the code K088, which was converted to a parent, non-billable code.

Table B.4.
Clinical Classifications Software Codes Used to Identify Conditions in ED and Hospital Discharge Data

CCS Category	Category Label
5	Mental Illness
5.12	Substance-related disorders
8.3	Asthma

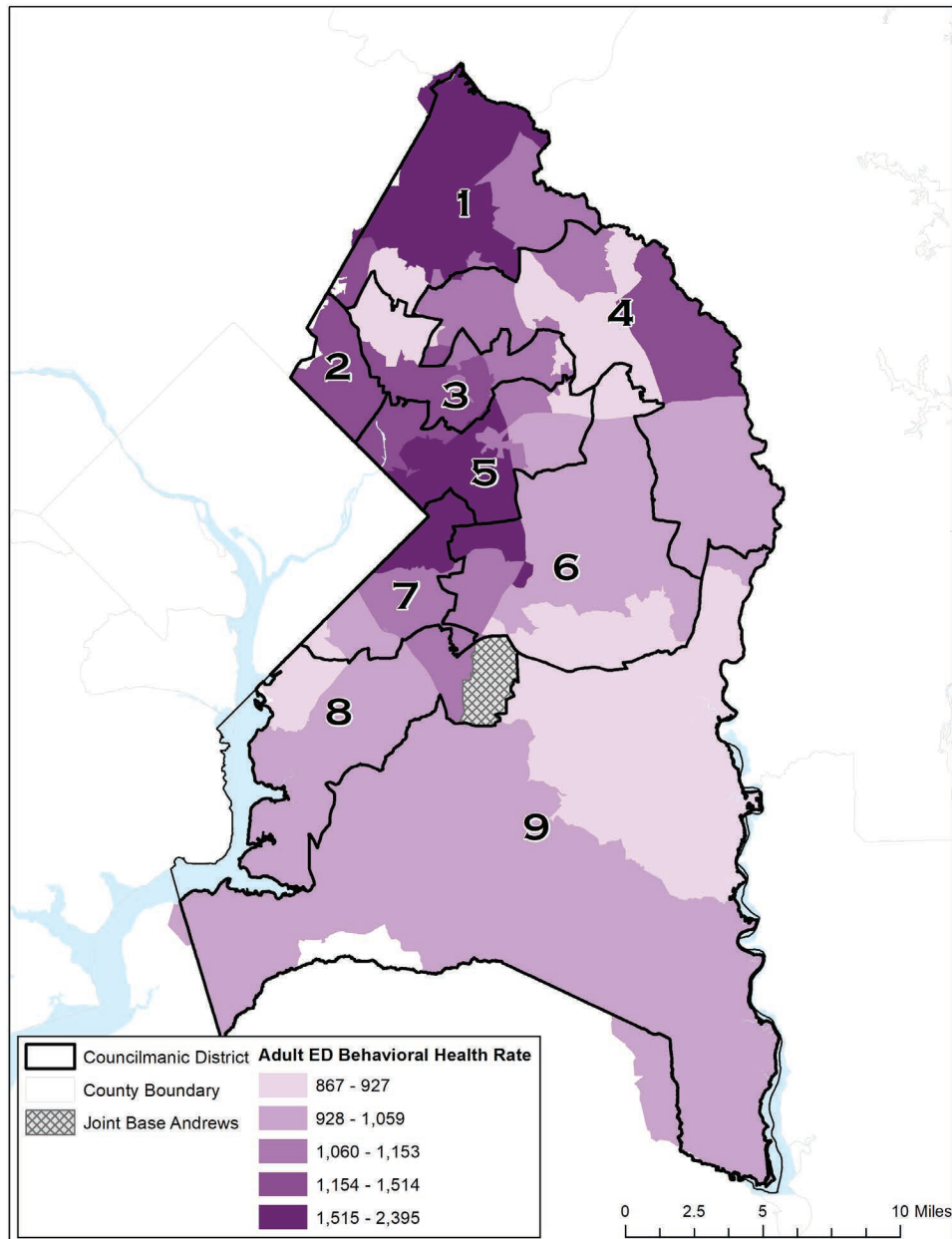
EMS Incidents

We report EMS incidents at the district level. The files we received did not identify councilmanic district, but they did contain Fire Box Areas and limited address information. To assign incidents to a district we first started by geocoding the address information. Because the address was often incomplete, we simultaneously pursued second approach. We used a Fire Box shapefile downloaded from Prince George's Planning Department GIS Open Data Portal to determine the intersection between Boxes and districts. In many cases Boxes were completely contained within a unique district. For the edge cases we calculated a percent of area contained within each district. We assigned these incidents to the district with the largest percent of the Box area. We compared district assignments when results were available for the two different methods.

We additionally dropped some incidents based on the type. We first dropped a limited set of incidents with an ADMIN call type. Then we collapsed some incident types related to assault and overdoses. Finally, because we were interested in reporting the most common incidents, we dropped any incident type with fewer than 1,000 observations over the complete 2017-2018 time period.

Appendix C. Maps Illustrating Variation in ED Visits and Inpatient Hospitalizations Among Prince George's County Residents, 2017

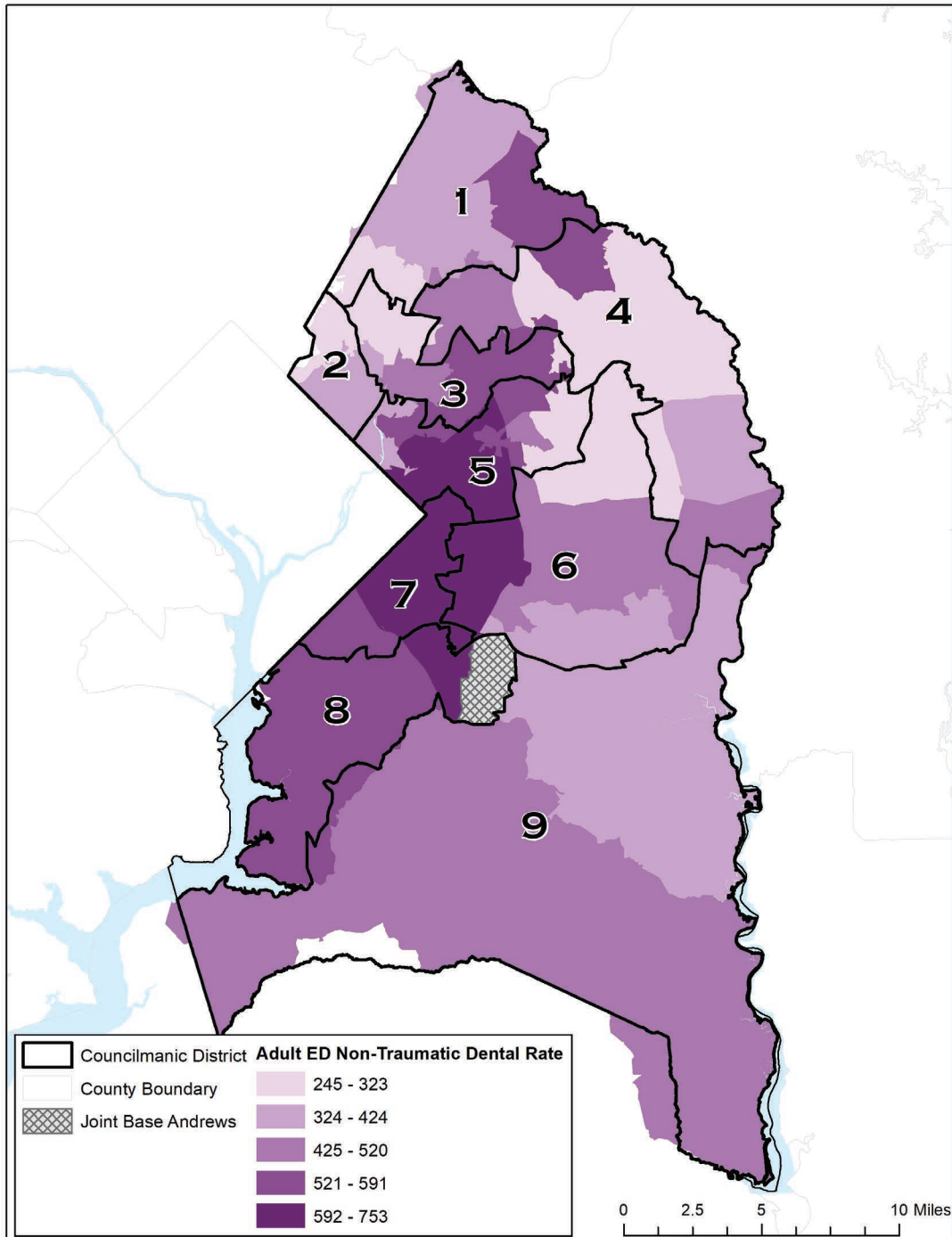
Figure C.1.
Rates of ED Visits for Adults for Mental and Behavioral Health Conditions per 100,000 Population in 2017, by ZIP Code



SOURCE: 2017 Maryland data was obtained from the Maryland Health Services Cost Review Commission. 2017 DC data was obtained from the DC Hospital Association.

NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents aged 18 years and older.

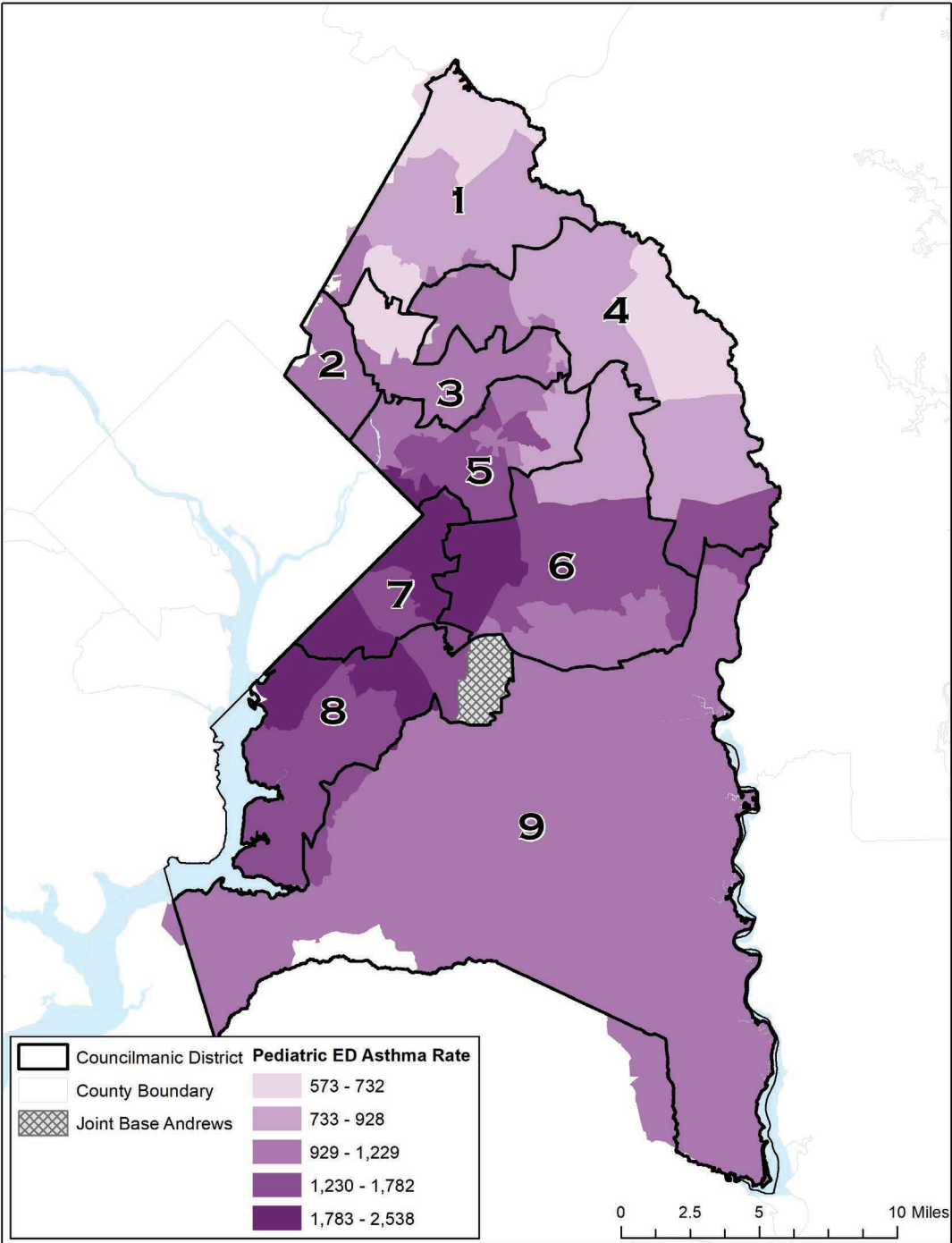
Figure C.2.
Rates of ED Visits for Adults for Non-traumatic Dental Care per 100,000 Population in 2017, by ZIP Code



SOURCE: 2017 Maryland data was obtained from the Maryland Health Services Cost Review Commission. 2017 DC data was obtained from the DC Hospital Association.

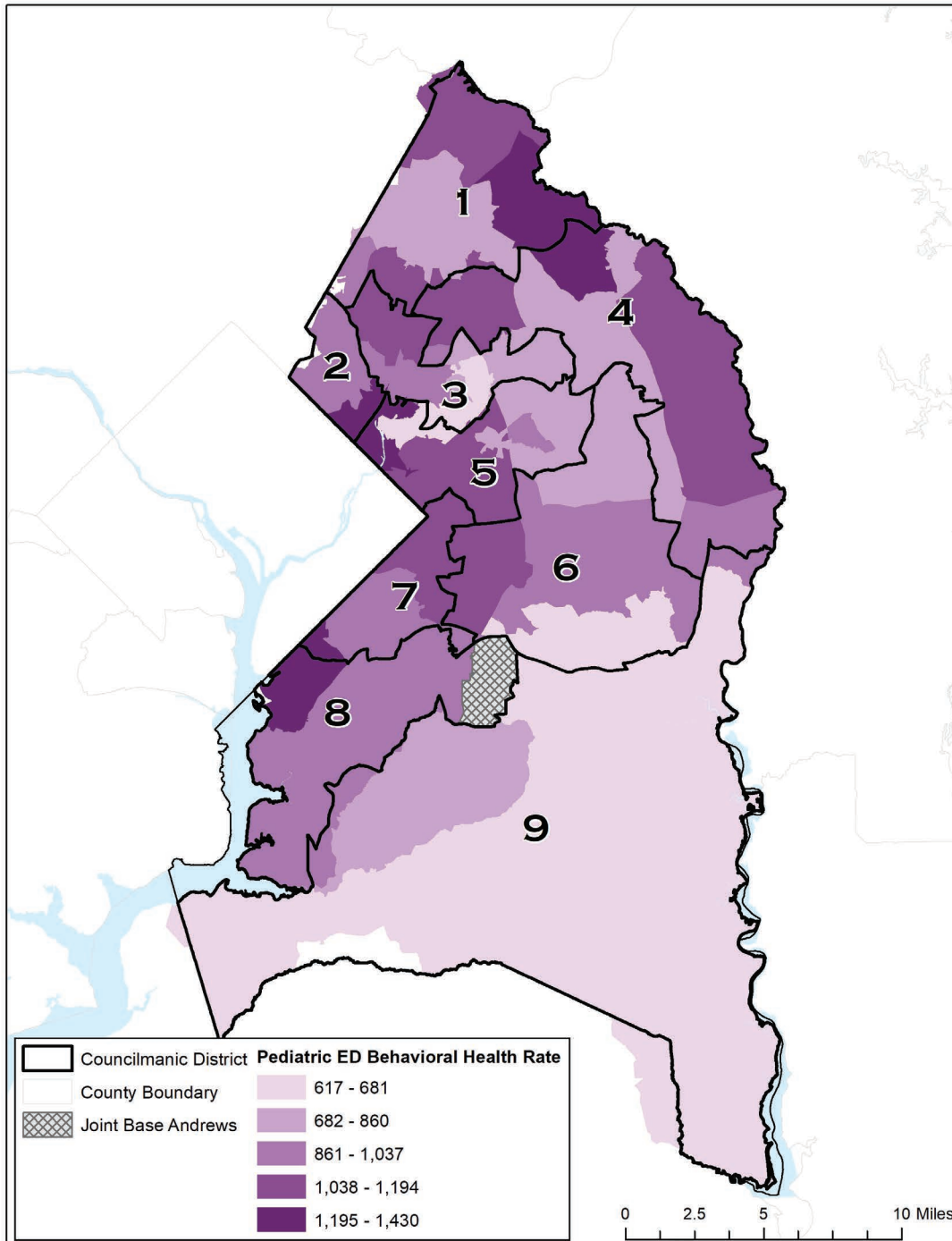
NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents aged 18 years and older. Non-traumatic dental care identifies conditions that can be prevented or best treated in a traditional dental office. It is an indicator of poor access to a usual source of dental care.

Figure C.3.
Rates of ED Visits for Children for Asthma per 100,000 Population in 2017,
by ZIP Code



SOURCE: 2017 Maryland data was obtained from the Maryland Health Services Cost Review Commission. 2017 DC data was obtained from the DC Hospital Association.
NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents aged younger than 18 years.

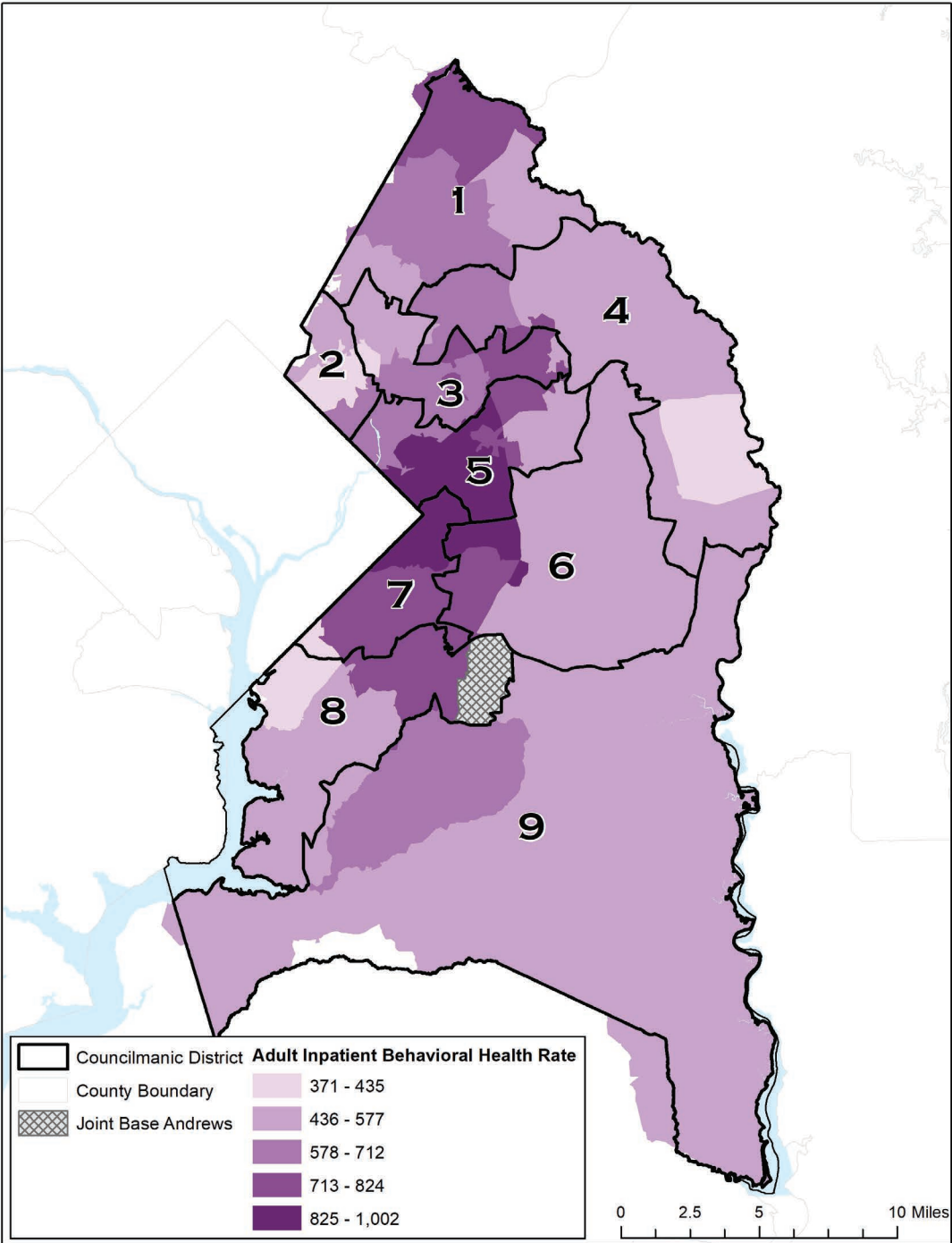
Figure C.4.
Rates of ED Visits for Children for Mental and Behavioral Health Conditions per 100,000 Population in 2017, by ZIP Code



SOURCE: 2017 Maryland data was obtained from the Maryland Health Services Cost Review Commission. 2017 DC data was obtained from the DC Hospital Association.

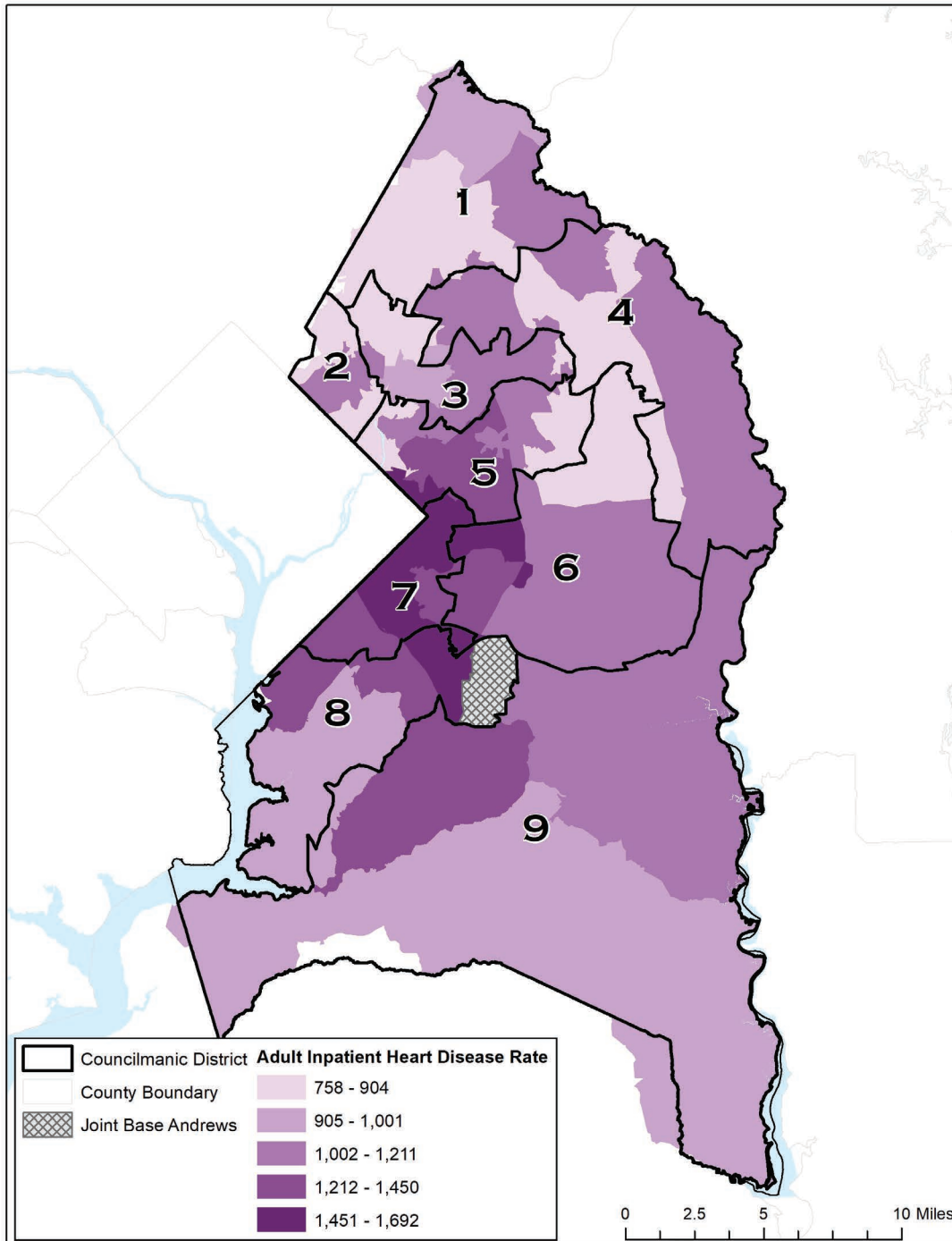
NOTES: Includes 2017 ED discharges in Maryland and DC for Prince George's County residents aged younger than 18 years.

Figure C.5.
Rates of Inpatient Hospitalizations for Adults for Behavioral Health Conditions per 100,000 population in 2017, by ZIP code



SOURCE: 2017 Maryland data was obtained from the Maryland Health Services Cost Review Commission. 2017 DC data was obtained from the DC Hospital Association.
NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents aged 18 years and older. Non-traumatic dental care identifies conditions that can be prevented or best treated in a traditional dental office. It is an indicator of poor access to a usual source of dental care.

Figure C.6.
Rates of Inpatient Hospitalizations for Adults for Heart Disease per 100,000 Population in 2017, by ZIP Code



SOURCE: 2017 Maryland data was obtained from the Maryland Health Services Cost Review Commission. 2017 DC data was obtained from the DC Hospital Association.

NOTES: Includes 2017 inpatient hospital discharges in Maryland and DC for Prince George's County residents aged 18 years and older. Non-traumatic dental care identifies conditions that can be prevented or best treated in a traditional dental office. It is an indicator of poor access to a usual source of dental care.

Appendix D. Sample Integrated *Health in All Policies* Budget Planning Template

The budget template below can be used to support efforts related to *Health in All Policies* and global health budgeting (described in Chapters Eight and Nine). This budget template was newly created for Prince George's County. However, it is informed by *Health in All Policies* budgeting insight from various sources and models, including but not limited to participatory budgeting (Campbell, Escobar, Fenton, & Craig, 2018) and *Health in All Policies* scorecards from Vermont (Vermont Department of Health, 2018b) and Santa Monica, California (City of Santa Monica, 2020). The text and template below offer an example for how to pursue *Health in All Policies*. The template would proceed in four steps.

Step 1: Map current investments against health outcomes or goals of interest. We used outcomes or goals given how usual county plans are organized. A similar approach could focus on influences or drivers. This step includes identifying relevant County departments and programs (the text below are dummy entries and not to be interpreted as complete).

Health and well-being outcome of interest (e.g., either outcome measure or health goal to achieve)	Key Influences or drivers on that outcome (e.g., housing, health literacy). Note this can be split by drivers if budgeting is oriented that way.	Department(s) most linked to that outcome	Program(s)/ or policy (ies) most relevant to outcome	Key aims of that program and alignment with health and well-being outcome of interest	Current reach of program/policy	Evidence of effectiveness, including benefit-cost information when available, outcome change	Current resources allocated (with attention to general fund-GF, grant-G, other-O)
<i>Sample entry</i>							
Decrease in unmet mental health need (i.e., those who need mental health services get services without delay or other barrier)	<ul style="list-style-type: none"> • Early identification of needs across sectors (e.g., schools, jails) • Distribution of mental/behavioral health providers • Transportation availability for reaching mental health services • Cultural awareness about the need for mental health services 	Health Department	Continuum of Care	Ensure wraparound services for those with mental health needs	3 County districts	Increase by 20% of individuals with MH needs who received indicated social support services	\$600,000 (G)
		Department of Family Services	Healthy Heights	Help children develop behavioral health supports	500 children trained in behavioral health education	Increase of children who can alert others to their own emotional needs	\$60,000 (G)
		Department of Corrections	Mental Health (MH) Unit	Provide MH services to inmates	2 jails with MH services	Reduced incidence of unmanaged serious mental illness	\$85,000 (G)
		Department of Public Works and Transportation	Rideshare	Help commuters form rideshares for health transport	4 County districts	20% fewer missed mental health appointments due to having transport	\$200,000 (G)

Step 1a. Reviewing the entries from Step 1, consider where there are gaps, redundancies and other alignment possibilities in programs and/or policies addressing the outcome by influences or drivers of interest.

Health and well-being outcome of interest (e.g., either an outcome measure or health goal to achieve)	Key Influences or drivers on that outcome (e.g., housing, health literacy), <u>not currently addressed in programs from Step 1</u>	Department(s) that <u>could</u> be linked to outcome	Relevant programs/policies currently funded (from step 1a)	What is missing by population, geography?	Where are there redundancies by population, geography?	What is missing by need area? This can include limited application of evidence based practice, not fully addressing influences, etc.?
<i>Sample entry</i>						
<i>Health Outcome: Decrease in unmet mental health need (i.e., those who need mental health services get services without delay or other barrier)</i>						
	<i>Early identification of needs across sectors (e.g., schools., jails)</i>	<i>Department of X</i>		<i>Population gap:</i>	<i>Population redundancy/overlap:</i>	1)
		<i>Department of Y</i>				2)
		<i>Department of Z</i>				3)
				<i>Geography gap:</i>	<i>Geography redundancy/overlap:</i>	4)

Step 2: Given information from Steps 1 and 1a, map health outcomes or goals of interest for programs that could support the outcome in the future. Consider what funds are needed to either repurpose or in some cases, add.

Health and well-being outcome of interest (e.g., either an outcome measure or health goal to achieve)	Key Influences on that outcome (e.g., housing, health literacy), <u>not currently addressed in programs from Step 1</u>	Department(s) that could be linked to outcome	Program(s)/or policy(ies) that could either be refined or complemented to address outcome (this can include expanding a program, adding a feature, or linking to a new geography or target population)	What is the alignment to that outcome?	What funds need to be added or combined with existing (with consideration of where funds come from: general fund-GF, grant-G, other-O)
<i>Sample entry</i>					
<i>Decrease in unmet mental health need (i.e., those who need mental health services get services without delay or other barrier)</i>		<i>Department of X</i>			

Step 3: Given Steps 1, 1a, and 2, consider what programs and policies you would rate as most critical for addressing the outcome of interest. Consider rating against three dimensions:

- Effectiveness – Evidence of change in outcomes; if available benefit-cost data as well
- Scalability – Reach more of the County, expand target populations, etc.
- Interoperability - Can be executed with coordination across Departments where relevant, to reduce inefficiencies

Step 3 would yield relative ratings to aid in prioritization.

Step 4: Given information from Steps 1-3, what would the budget be for this health and well-being outcome or goal?*

Health and well-being outcome of interest (e.g., either an outcome measure or health goal to achieve)	Top rated programs/policies (from Step 3)	Relevant Department (s)	Total dollars now	Recommended funds	Expected reach (e.g., population, geography)	Outcome measures to track
<i>Sample entry</i>						
<i>Decrease in unmet mental health need (i.e., those who need mental health services get services without delay or other barrier)</i>		<i>Department of X</i>				

*Review Step 4 for the following:

- Are all drivers of the health and well-being outcome/goal now addressed through these selections?
- Do the engaged departments span the County sectors in a way that is integrated? Sensible? Feasible?
- Do the total dollars now funding the outcome/goal of interest meet or exceed a reasonable threshold, relative to other health and well-being outcomes?

Appendix E. Guidance for Implementing *Health in All Policies* in Prince George's County

The following pages offer a brief summary of the key findings of this report.

Guidance for Implementing *Health in All Policies* in Prince George's County

Derived from the 2020 RAND report titled "Assessing Health and Human Services Needs to Support an Integrated Health in All Policies Plan for Prince George's County, Maryland"

This brief provides an overview of the health and human services needs of residents in Prince George's County. It offers guidance to County policymakers in their pursuit of Health in All Policies, an approach that aligns county funding, across departments and services, with needs and desired health outcomes.

Prince George's County is at a crossroads, providing the County with an opportunity for holistic health planning, resource allocation, and systems change, due to the following factors:

- Rapidly changing demographics (e.g., growing senior, Hispanic, and immigrant populations)
- New health care infrastructure (e.g., University of Maryland Capital Region Medical Center under construction)
- Growing concerns about health care expenditures, including where and how health services are provided
- Persistent chronic disease burden, including mental and behavioral health conditions
- Desire to focus on health equity and address the role of systemic factors in influencing health
- Increasing interest in health promotion policies, social determinants of health, and investment in holistic health and well-being

Prince George's County has an opportunity to address challenges resulting from the connections between health and well-being, the systems that drive health, and the systemic factors that influence health over generations. Challenges include the following issues:

Inefficient uses of the health care system remain despite improvements.

- One in four calls for emergency medical services were for nonurgent needs.
- EDs continue to be used for preventable issues, such as asthma and dental care.

Highlights need to rebalance investments in health care use and drivers of health

Residents encounter challenges in navigating health and human services.

- Barriers include lack of health insurance (particularly for noncitizen immigrants), transportation, and lack of awareness of available services and resources.
- Shortages of primary care providers, behavioral health providers, and dentists impact access, as does the cultural competency of providers.

Offers insight into why some residents may use costly emergency services when primary care is a better option

Spending on health and human services is low.

- Estimated County spending on health and human service departments is \$39 per person, about one-third to one-seventh the per-person spending of surrounding Maryland counties.

Inefficient health-services use is suggestive of reduced access to health and human services, which can contribute to inequities in health and well-being.

Systemic inequities in health drivers place some communities farther behind in building healthy futures.

- Districts are differentially impacted by drivers of health and thus encounter different health challenges.
 - District 2 has high rates of uninsurance and is predominantly Hispanic, a population with a teen-birth rate more than double the County rate.
 - District 3 has the highest poverty rate and numerous community "hot spots" of low-income individuals with poor access to healthy food.
 - District 7 is predominantly Black, has low health literacy and the highest ED visit rates for adults and children in the County.

Recommendations for *Health in All Policies*

GETTING STARTED

Prince George's County has many paths forward as it considers a more integrated approach to influencing health and well-being and reducing inequities. Here are a few places to start:

County Council Acting as the Board of Health:

- Require a more detailed County inventory (government and ideally, nongovernment) of the places and programs in which health services (e.g., health education, health promotion, clinical services) are being provided and who is receiving these services (in order to measure and reduce inequities).
- Align information about what is being spent on these health services and information on reach, effectiveness, and impact on reducing inequities.
- Require all nongovernmental organizations receiving County funding to identify their role(s) in promoting health and well-being and reducing inequities.

County Agencies:

- Centralize data on drivers of health with information on health services and health outcomes, including requiring common reporting on drivers by each County agency.
- Update the County website to coordinate information on what influences health across sectors. Offer resources organized by the health drivers to better support populations with health issues in more integrated ways.

LIST OF RECOMMENDATIONS

The designations of LB (Legislative Branch) and EB (Executive Branch) denote where key leadership likely resides.

Create a <i>Health in All Policies</i> system
1.1 Develop a coordinated <i>Health in All Policies</i> system that creates guidelines for governance (LB).
1.2 Create a strategic plan for all health and human services agencies (EB).
1.3 Implement policies that promote health equity, including design and economic environment decisions (LB).
1.4 Improve the delivery and coordination of health services, including better screening for social needs (EB).
1.5 Improve the accessibility, clarity, and usability of health and human services promoting resources and related civic engagement opportunities among County residents (EB).
Align investments
2.1 Break down silos between funding streams for health and human services, particularly in ways that can better leverage and coordinate grant funding (LB).
2.2 Engage the nontraditional health sector (e.g., Fire/EMS, Police) to participate in "health mapping" and analysis (LB and EB).
2.3 Better coordinate the nongovernmental organizations that address health and human services needs in the County, and employ high capacity nonprofits strategically (EB and LB).
Implement new measurement and data systems
3.1 Identify data gaps and implement systems to address gaps (EB).
3.2 Improve structures that support health and well-being data transparency and stewardship (LB).



With evolving demographics and a changing health system landscape, the Prince George's County Council, acting as the County Board of Health, is considering its future policy approaches and resource allocations related to health and well-being. To inform this path forward, the authors of this report used primary and secondary data to describe both the health needs of county residents and drivers of health within the county, inclusive of the social, economic, built, natural, and health service environments. This report integrates these findings, an analysis of budget documents, and a review of promising practices from other communities to situate recommendations in a Health in All Policies framework to foster aligned and integrated planning and budgeting across the county to promote health and well-being. Findings from the assessment indicate a shared interest among leaders and residents to embrace a holistic strategy for health and well-being in the county. Inefficient uses of the health care system are identified, highlighting a need to rebalance investments in health care use and drivers of health. Additionally, challenges in navigating health and human services and inequities in drivers of health across communities are noted, signaling broader concerns related to residents' access to health and human services that influence health and well-being outcomes. Recommendations are provided for several paths forward for the county to pursue a more integrated policy approach to influence health and well-being outcomes.

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