Cameron Foundation
Service Area
Health Needs Assessment

Executive Summary

THE CAMERON FOUNDATION

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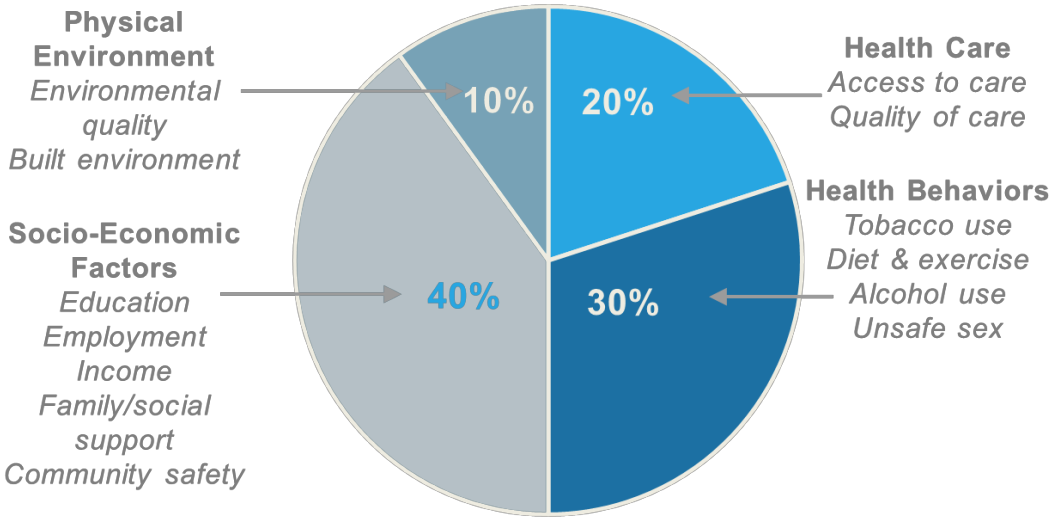
Executive Summary

Introduction

The Cameron Foundation Health Needs Assessments have provided information on the health needs of the citizens of the Tri-Cities and surrounding counties since 2008. In 2014, The Foundation shifted strategically to include a focus not only on the importance of access to health care but to intentionally understand and strategically address the social determinants of health. Social determinants of health (SDOH) are the social, economic, and environmental conditions in which people live, learn, work, play, and worship that impact a wide range of health conditions, daily functioning, and quality of life.[1]

This assessment builds on the focus of the social determinants of health (SDOH) by enhancing the emphasis on the distribution of SDOH across demographic populations and geographic areas in order to highlight many of the root causes of health disparities within and between jurisdictions. Social determinants of health (SDOH) such as the built environment, safe and affordable housing, access to education, employment, public safety, access to healthy foods, access to local emergency/health services and environments free of life threatening toxins can all have an influence on population health outcomes.[2] Data demonstrates that SDOH account for half of the factors that shape health outcomes. This demonstrates the importance of addressing SDOH as key levers for promoting population health and health equity.



Source: Authors' analysis and adaptation from the University of Wisconsin Population Health Institute's County Health Rankings model ©2010, http://www.countyhealthrankings.org/about-project/background

Health equity is defined as everyone having a fair and just opportunity to be healthy.[3] The figure below is a visual depiction of the difference between equality and equity. The visualization shows that one equal size and type of bicycle does not work well for everyone because people are different sizes and ages and have different levels of physical abilities. However, when different types and sizes of bicycles are adjusted to fit the needs of different bicyclists all types of users are able to ride a bicycle.

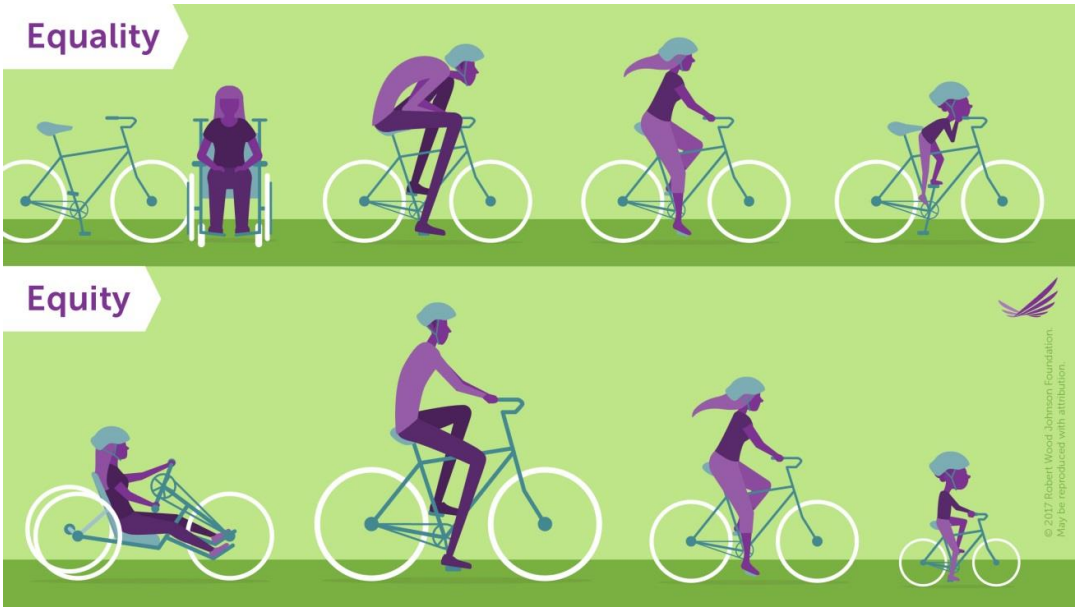


Figure 2. A visualization of the difference between health equality and health equity using an example of bicycle sizes. Source: Robert Wood Johnson Foundation. 2017. Retrieved 08/04/18 from https://www.rwjf.org/en/library/infographics/visualizing-health-equity.html#/download

Similarly, assessing health disparities as part of a community health assessment helps to identify populations in a community who may have more or unique barriers to accessing opportunities to improve their health than other groups. This information can help to inform future policies, programs and initiatives to address health disparities by assuring that health opportunities (i.e. bicycle size and type) are equitable. Demographic groups across which disparities often occur can include gender, race/ethnicity, income, sexual identity and orientation, disability status or special health care needs, and geographic location, including neighborhood and urban-rural disparities.[4]

Methodology

The Virginia Department of Health, Petersburg and Hopewell Health Departments completed a Community Health Assessment on the cities of Petersburg and Hopewell, both of which are in the Cameron Foundation service area. In an effort to avoid duplication of efforts, the Cameron Foundation worked with the Virginia Department of Health and the Institute for Public Health Innovation to complete a Community Health Needs Assessment on the City of Colonial Heights and the counties of Dinwiddie, Prince George, and Sussex. The southern portion of Chesterfield County is also a part of The Cameron Foundations service area and will be included in this report when data is available. In the Clinical Care section of the report, data indicators for Chesterfield County are reported for the entire county of Chesterfield and when available, the southern portion of the County.

Results

Robert Wood Johnson Foundation (RWJF) County Health Rankings

Health Outcomes

The RWJF County Health Rankings rank all cities and counties in Virginia on factors that shape health and the health outcomes themselves. The rankings allow one to compare health status and the factors that shape health outcomes among the jurisdictions in the Foundation's service area, and to the rest of the Commonwealth. It is important to keep in mind that the rankings for each locality are relative to the other localities. For instance, an improvement in health factors or health outcomes may occur in a locality but if the other localities have even greater improvements in health factors or health outcomes, then the first locality will still be ranked below those localities with even greater improvements.

As described earlier, the County Health Rankings' methodology measures county/city-level health outcomes using multiple factors. Contributors to health outcomes (referred to as health factors) are subdivided based on their known contribution to population health in the public health literature: Clinical Care (20%), Health Behaviors (30%), Social and Economic Factors (40%), Physical Environment (10%). It is important to note that the factors we associate most closely with health outcomes (clinical care and health behaviors) only account for 50% of what defines our health. The other 50% is the social determinants of health (e.g. social and economic factors and the physical environment). The health outcomes rankings for this report are found in Figure 3. Chesterfield (entire county) and Prince George rank in the top 25% of cities and counties in Virginia. The remaining localities rank in the lower half of Virginia. Hopewell and Petersburg ranked in the bottom 10, with Petersburg ranking last in Virginia.

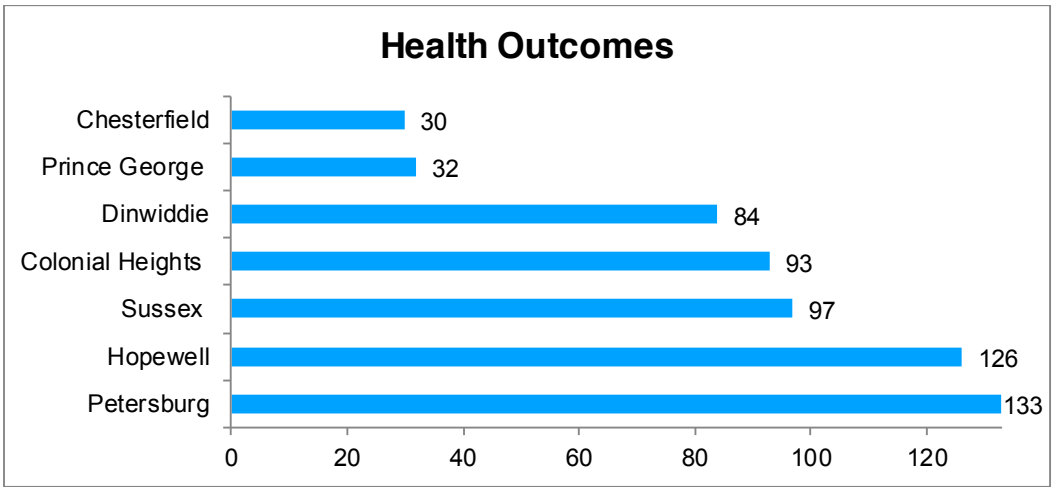


Figure 3. County and city health outcome rankings from the RWJF County Health Rankings. 1-represents the highest rank (best health) in Virginia. 133- represents the lowest rank (worst health) in Virginia.

Tracking the rankings in health outcomes across multiple years identifies trends in how individual localities fare, compared to others in the region and in Virginia. Figure 4 demonstrates that Chesterfield and Prince George have consistently ranked better in health outcomes compared to other localities in the region from 2011-2018; however, both localities have seen a slow worsening in their ranking since 2011. Petersburg has consistently ranked worst in health outcomes in the region. For four years during this time period, Petersburg had the worst ranking in the state. Hopewell has consistently ranked second to last in the region, followed by Sussex. Colonial Heights and Dinwiddie have ranked in the middle during this time period. There has been a slight improvement in Dinwiddie, while the rankings in Colonial Heights have trended upwards (worsening) since 2011.

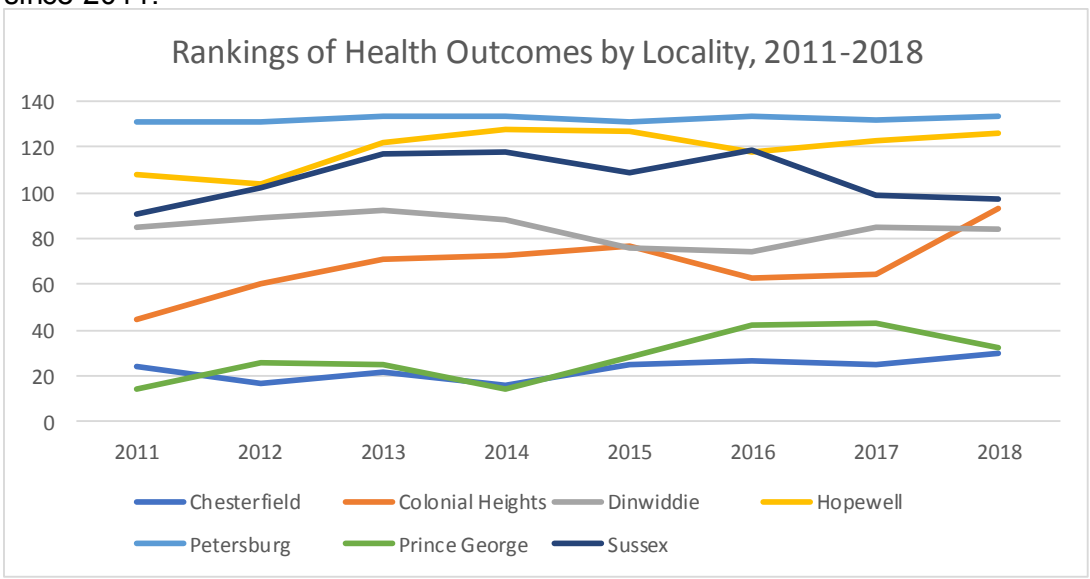


Figure 4. Trends in health outcome rankings in the region during 2011-2018.

Health Factors

Examining the health factors can shed light on the contributors to health outcomes. There is not a 1:1 correlation between health factors and health outcomes, but their relative ranks can provide insights into how health factors may influence outcomes. Figure 5 displays the composite of all health factors for each locality. The rankings for each factor (e.g. clinical care, behaviors, social and economic, and physical environment) can be found in the full report. As with health outcomes, Chesterfield ranks best in health factors. Colonial Heights ranks relatively better in health factors than they did in health outcomes, while the remaining localities follow the same trend as for health outcomes.

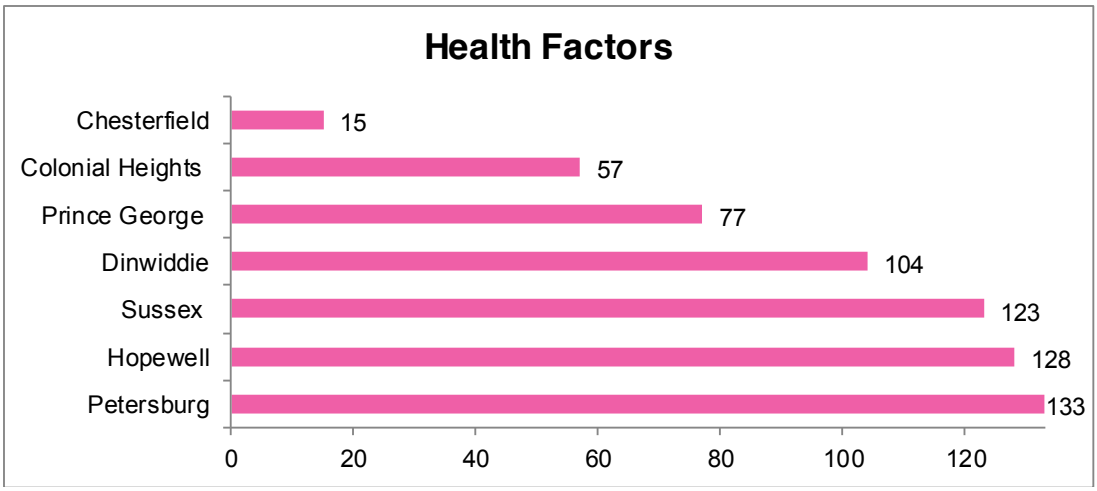


Figure 5. County and city health factor rankings from the RWJF County Health Rankings. 1-represents the highest rank (best health) in Virginia. 133- represents the lowest rank (worst health) in Virginia.

Tracking the rankings in health factors across multiple years identifies trends in how individual localities fare, compared to others in the region and in Virginia. In addition, those trends can identify potential concerns if health factor rankings worsen over time, which suggests that health outcome rankings may begin to worsen as well. Similarly, consistent improvements in health factor rankings may be expected to precede improvements in health outcome rankings.

Figure 6 shows that Chesterfield consistently has the best ranking between 2011-2018, consistent with its health outcomes. Colonial Heights, however, exhibits much better health factor rankings than its health outcomes would suggest. In addition, their rankings have worsened since 2016. Conversely, Prince George's health factor rankings are worse than one would expect, given their good health outcomes. These findings suggest the need for further exploration to determine why health outcomes in Colonial Heights do not benefit from their relatively good health factor rankings. Similarly, there may be important lessons to learn from the relatively higher health outcome rankings in Prince George compared to their health factor rankings. Since 2013, Sussex's and Dinwiddie's relative health factor rankings have been consistent with their relative health outcomes rankings. Every year during 2011-2018, Hopewell and Petersburg ranked

second to last and last, respectively, in the region. In fact, Petersburg's rankings for health factors were worst in Virginia for six out of eight years. The health outcomes rankings for Hopewell and Petersburg were consistent with their health factor rankings.

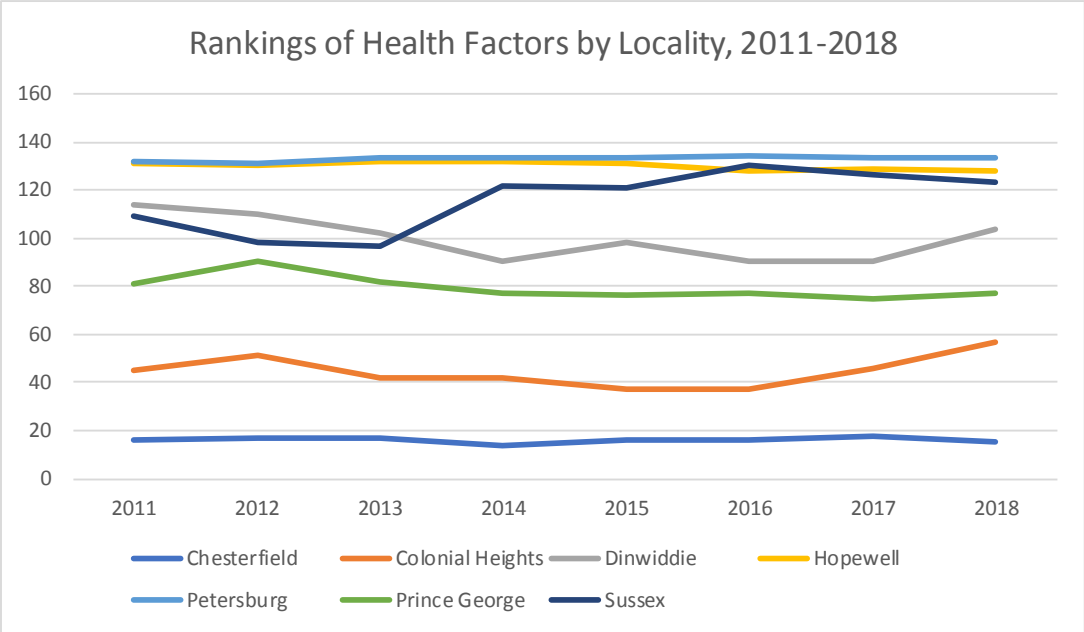


Figure 6. Trends in health factor rankings in the region during 2011-2018.

The County Health Rankings allow one to track SDOH and health status in the region and identify disparities between jurisdictions. While the rankings do not identify disparities within localities, the rich data they provide can be combined with Census Tract level data, such as the Vulnerable Populations Footprints and life expectancy maps to identify areas within jurisdictions facing the most barriers to good health and the poorest health outcomes. In addition, trends in health factors and health outcomes over time allow the reader to track progress, identify questions for further exploration, and track changes in health factors that could foreshadow significant changes in health outcomes.

Vulnerable Population Footprint

The Vulnerable Population Footprint identifies Census Tracts within the service area with low educational attainment and high poverty. These areas represent portions of the region in which at least 20% of the population lives below 100% of the federal poverty level (FPL) and at least 25% of the population lacks a high school diploma or equivalent. The footprint also identifies the demographic characteristics of the populations living in that area, including race/ethnicity, gender, age, 100% FPL and 200% FPL, and linguistic isolation.

As can be seen in figure 7, areas with at least 20% of population below 100% FPL (orange) are clustered in and around Petersburg and Hopewell. One census tract in Colonial Heights and several in Dinwiddie County also experience high poverty rates. Cen-

sus tracts experiencing both high poverty rates and low educational attainment (red) are found exclusively in Petersburg and Hopewell.

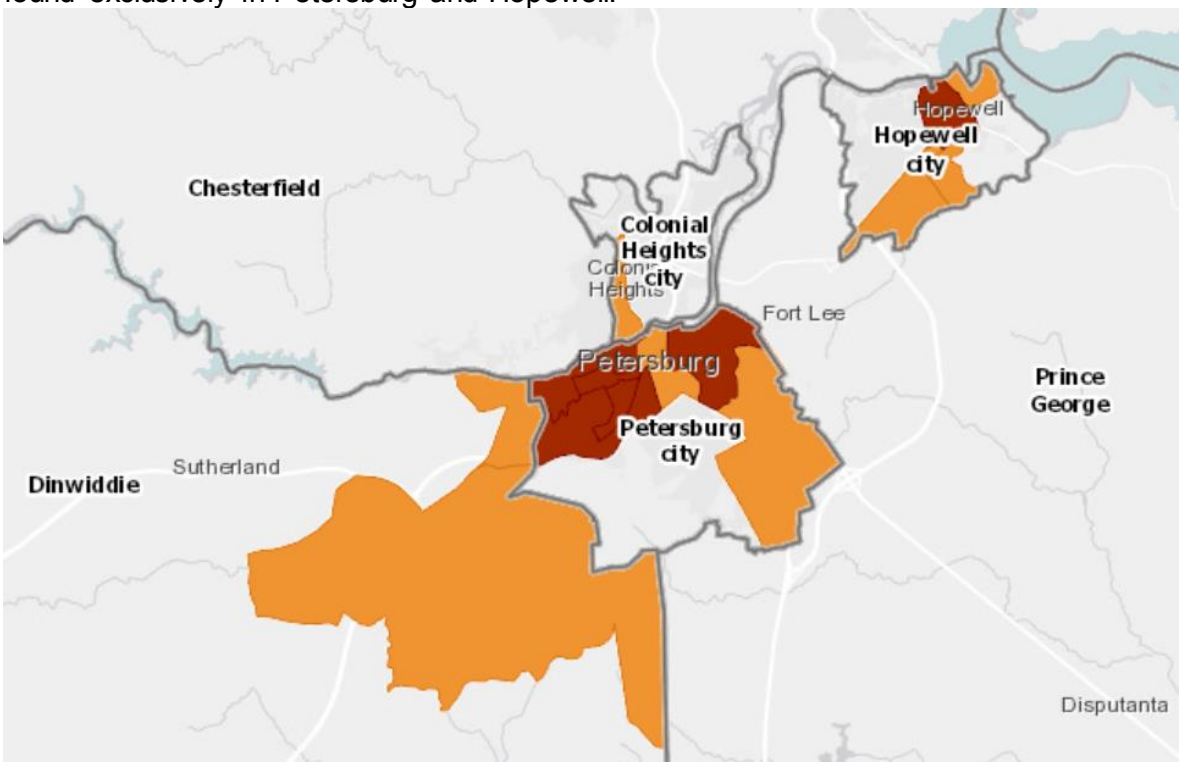


Figure 7. Vulnerable Populations Footprint for the Cities of Colonial Heights, Hopewell, and Petersburg, and the Counties of Chesterfield (southern), Dinwiddie, and Prince George. Orange represents areas with at least 20% of the population below 100% FPL. Purple represents areas with at least 25% of the population with less than a high school diploma or equivalent. Red represents areas above both thresholds.

The demographics of the vulnerable populations footprint (red) in Figure 5 are disproportionately Black or African American (71%). Of the remaining individuals, 20.2% are White, 1.3% Asian, 0.3% Native American/Alaska Native, 2.1% multiple race, and 5.0% Hispanic/Latino. Overall, 36.4% of this population live below 100% FPL and 32.6% do not have at least a high school diploma. In addition, 2.2% of the residents of this footprint are linguistically isolated.

Figure 8 depicts the vulnerable population footprint for the southern portion of the Cameron Foundation's service area. High poverty areas can be seen in the Waverly and Wakefield areas of the county (orange). Areas with low educational attainment (purple) can be seen in the Stony Creek and Jarratt portions of the county. No areas meet the criteria for a vulnerable population, which is characterized by both high poverty and low educational attainment.

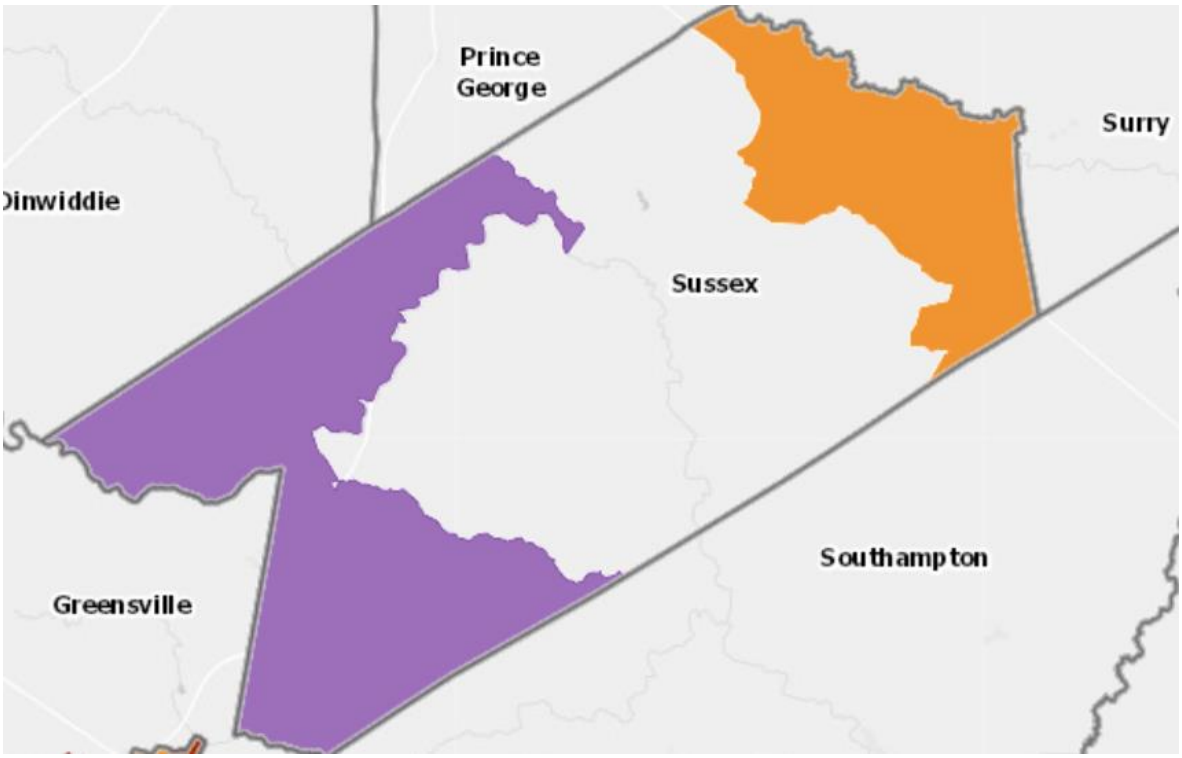


Figure 8. Vulnerable Populations Footprint for the county of Sussex. Orange represents areas with at least 20% of the population below 100% FPL. Purple represents areas with at least 25% of the population with less than a high school diploma or equivalent. Red represents areas above both thresholds.

The demographics of the vulnerable populations footprint in Figure 6 are similar to the racial and ethnic distribution of Sussex County as a whole, 59.4% are Black or African American, 34.3% are White, 0.25% are Asian, 0.4% are Native American/Alaska Native, 1.1% are multiple race, and 5.0% Hispanic/Latino. Overall, 29.2% of this population live below 100% FPL and 27.7% do not have at least a high school diploma. In addition, 2.1% of the residents of this footprint are linguistically isolated.

The Vulnerable Populations Footprint identifies those neighborhoods and communities that face significant socioeconomic challenges and are at heightened risk for poor health outcomes. Combined with maps of life expectancy at the Census Tract level, these data paint a detailed picture of health and life opportunities and outcomes in the service area.

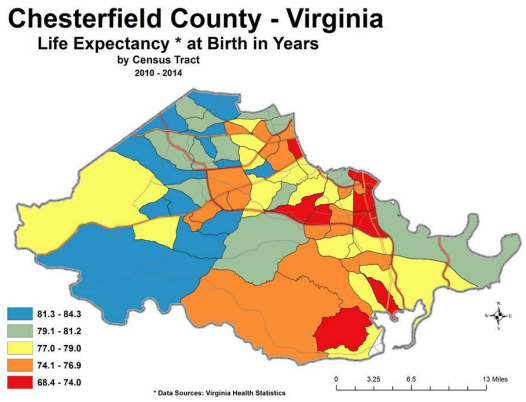
Census Tract Life Expectancy Maps

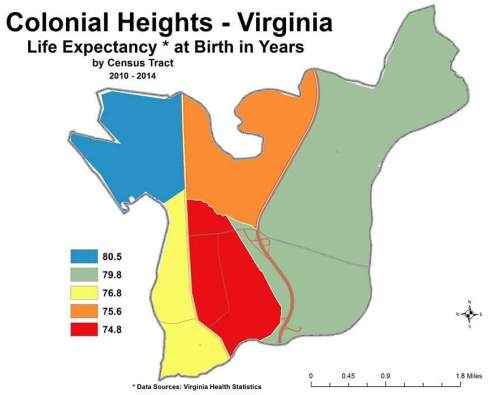
Life expectancy maps visually display the years of life from birth an individual in a Census Tract is expected to live. This measure can be thought of as a composite of the death rates for all causes within a geographic location. Figure 9 includes maps for each of the jurisdictions within this report. Each color represents a different life expectancy range, with blue being the longest life expectancy, followed by green, yellow, orange, and red with the shortest life expectancy. A number of patterns can be seen. First, it is clear that the overall health rankings for each jurisdiction do not tell the entire story of health status within the jurisdiction. Within each city and county significant disparities in life expectancy exist. Petersburg has a life expectancy disparity of 17 years across all Census Tracts. Chesterfield, with the overall best health outcomes, experiences a 15.9-year disparity in life expectancy across Census Tracts. Others follow with a life expectancy disparity of 15.3 years in Hopewell, 5.7 years in Colonial Heights and Sussex, 5.2 years in Dinwiddie, and 4.6 years in Prince George.

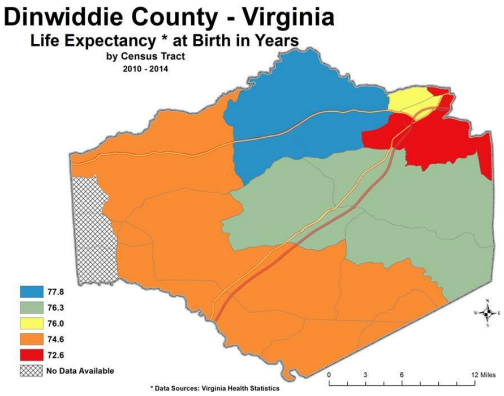
In addition, Colonial Heights, Dinwiddie, Hopewell, Petersburg, and Prince George all have one or more red Census Tracts (lowest life expectancy) that overlap with the Vulnerable Populations Footprint (high poverty and low educational attainment). In addition, the lowest life expectancies in Sussex overlap with the Census Tracts in which at least 20% of the population lives below the Federal Poverty Level.

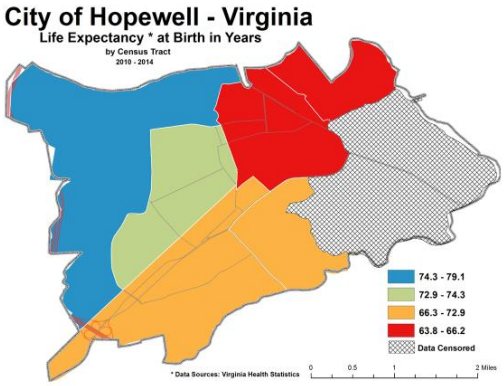
It is also evident that there are other Census Tracts in each locality with low life expectancy that do not overlap with the Vulnerable Populations Footprint. These areas may experience other socioeconomic or health-related challenges that are revealed in the full report and/or require further exploration with local partners.

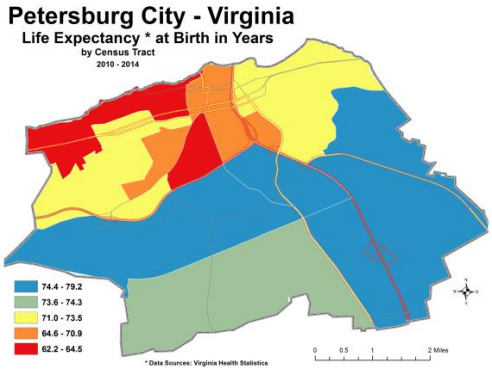
Finally, life expectancy varies by gender and race across all of the jurisdictions. The life expectancy for women is higher than men across all Census Tracts in each jurisdiction, with women living anywhere from 3.2 to 6.3 years longer than men. The life expectancy disparity by race varies between White and Black residents from 0.2 years in Colonial Heights, 0.9 years in Petersburg, 1.0 years in Hopewell, 1.1 years in Sussex, 3.7 years in Chesterfield, 3.9 years in Prince George, to 4.9 years in Dinwiddie, with Whites living longer in each case.



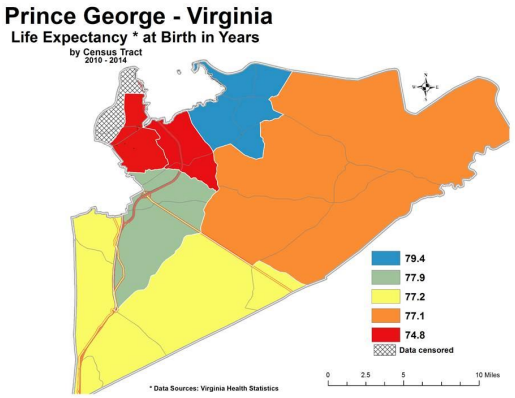


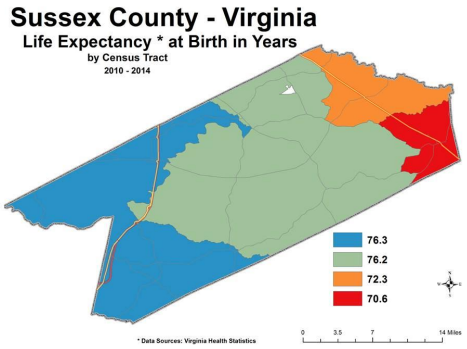






Figures 9-13. Census Tract life expectancy maps for Chesterfield, Colonial Heights, Dinwiddie, Hopewell, and Petersburg. Source: Virginia Department of Health.





Figures 14 and 15. Census Tract life expectancy maps for Prince George and Sussex. Source: Virginia Department of Health.

Conclusion

The County Health Rankings, Vulnerable Populations Footprint, and Census Tract life expectancy maps provide a snapshot of the extensive amount of useful data found in the 2018 Cameron Foundation CHNA. The County Health Rankings identify the relative presence or absence of multiple health factors within each locality in the region and across the state. The rankings also demonstrate the relative health outcomes within the region and across Virginia. The Footprint allows the reader to explore socioeconomic factors within the localities by mapping poverty and educational attainment at the Census Tract level. The Census Tract life expectancy maps demonstrate how long residents can expect to live, depending on where they reside. Together, these tools provide valuable information for communities and professionals to work collaboratively to promote improved health and quality of life within individual jurisdictions and across the region. In addition, parts of the region exhibiting a combination of challenging socioeconomic conditions and health outcomes warrant additional focus, resources, and energy in order to achieve health equity. Key strategies that are necessary to translate this report into action to achieve optimal health within the Cameron Foundation's service area include:

1. Convene diverse partners, including communities experiencing health disparities and agencies and organizations that work on the social determinants of health, to review and interpret the report's findings

2. Collectively identify overall health priorities, including disparities

3. Develop collaborative strategies based on the relative contribution of health factors to health outcomes; make a commitment to achieving health equity

4. Focus on the social determinants of health and their distribution across populations and geographic areas as integral strategies

5. Focus primarily on policies, systems, and environmental changes in order to create sustained improvements that have a population-wide impact

6. Build on existing interventions and fill gaps to maximize scarce resources and avoid duplication

7. Evaluate progress and outcomes on the overall population, and for specific communities and populations facing health disparities; use evaluation results to refocus efforts