RIVERSIDE

Tappahannock Hospital

2016 Community Health Needs Assessment and Implementation Plan

This Community Health Needs Assessment and Implementation Strategy for Riverside Tappahannock Hospital was conducted and developed between March 9, 2016 and September 30, 2016 to fulfill the requirements described in section 501(r)(3) of the Internal Revenue Code. It was formally approved and adopted by the Riverside Tappahannock Hospital Board of Directors on October 24, 2016.

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COMMUNITY HEALTH NEEDS ASSESSMENT

Introduction

Riverside Tappahannock Hospital is part of Riverside Health System, with a mission to "care for others as we would care for those we love." While Riverside cares for its patients every day, it recognizes that caring for others can often mean those who are not in the hospital. Riverside Tappahannock Hospital understands it has a unique and important role in caring for the health of its community. Conducting a Community Health Needs Assessment allows Riverside to see the community as a broader population, and better understand the unique needs, concerns and priorities of the community it serves.

Community Health Needs Assessment Process

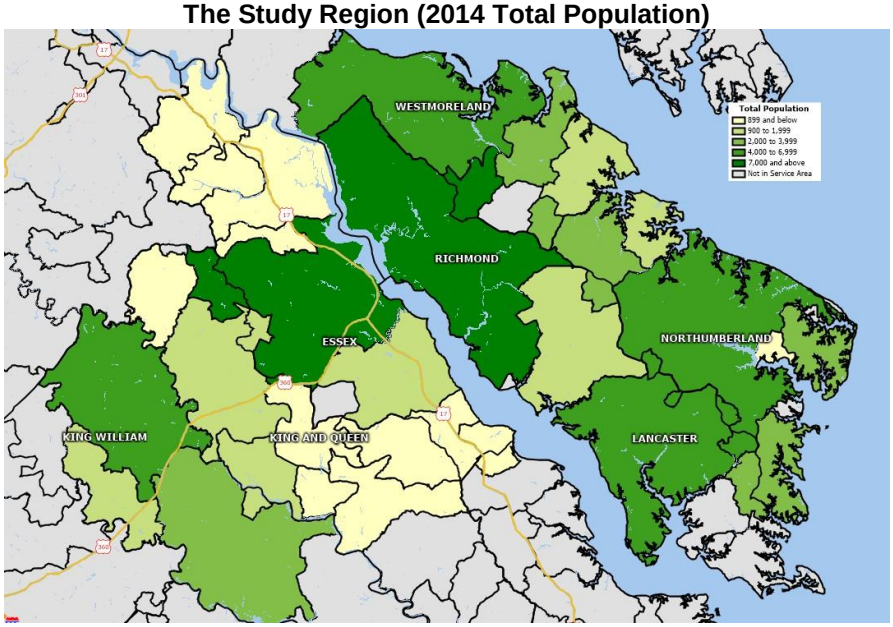
A Community Health Needs Assessment (CHNA) and Implementation Strategy for Riverside Tappahannock Hospital was conducted between March 9, 2016 and September 30, 2016 in fulfillment of the requirements described in section 501(r)(3) of the Internal Revenue Code. The CHNA was conducted with the assistance of Community Health Services, Inc. of Richmond, Virginia who collected the health indicator data and facilitated the community survey process.

The CHNA process consisted of four phases: data collection (quantitative), community input (qualitative), analysis and prioritization. The quantitative data is summarized in this report, and represents a broad assessment of demographic and health indicators. The data sources are noted within each section. The community input data was gathered through an electronic survey process from March 9 – April 18, 2016. The survey recipients and respondents of the survey are noted in the report. Riverside's Marketing, Strategy & Development team worked with Community Health Services, Inc. to analyze the data and present it in summary from for review by the community stakeholders. In August and September of 2016, a group of community stakeholders came together to review the data, ask questions, discuss area solutions and prioritize the needs to be addressed. Due to the overlap of services and organizations, the stakeholders from the Middle Peninsula and Northern Neck regions decided to work together to prioritize the issues and develop action plans. The CHNA implementation strategies for Riverside Walter Reed Hospital and Riverside Tappahannock Hospital were developed jointly. The details of those meetings appear in the report.

Community Served by the Hospital

The community served by Riverside Tappahannock Hospital is a geographic region that covers 29 ZIP codes across the counties of Essex, Richmond, Northumberland, Westmoreland, Lancaster, King and Queen and King William.

The Study Region (2014 Total Population)



Community Indicators

The community indicators present a wide array of quantitative community health indicators for the study region. To produce the profiles, Community Health Solutions analyzed data from multiple sources. By design, the analysis does not include every possible indicator of community health. The analysis is focused on a set of indicators that provide broad insight into community health, and for which there were readily available data sources. Detailed reviews follow, but to summarize:

- **Demographic Profile.** As of 2014, the study region included an estimated 62,444 people. The population is expected to increase slightly by 2019. Compared to Virginia as a whole, the study region is more rural, older, and has proportionally more Black/African American residents. The study region also has lower income and education levels than Virginia as a whole. These comparative patterns were also seen in the 2011 demographic profile reported in the 2012/2013 CHNA.

- **Mortality Profile.** In 2013, the study region had 714 total deaths. The leading causes of death were malignant neoplasms (cancer), heart disease and cerebrovascular diseases. Death rates were higher than the statewide rates for all deaths combined, and for malignant neoplasms, heart disease, cerebrovascular diseases and chronic lower respiratory diseases. Cancer, heart disease and cerebrovascular diseases were also the three leading causes of death in 2010 as reported in the 2012/2013 CHNA.

- **Maternal & Infant Health Profile.** In 2013, the study region had 566 total live births. Compared to Virginia as a whole, the study region had higher rates of low weight births, births without early prenatal care, non-marital births, and teenage births. Additionally, the study region rates were higher than the statewide rates for teen pregnancy and five-year infant mortality. Comparing the 2013 profile to the 2010 profile reported in the 2012/2013 CHNA, the study

region rates increased for low weight births, births without early prenatal care, and non-marital births, but declined for live births overall, teen pregnancy, and five-year infant mortality.

- **Preventable Hospitalization Discharge Profile.** The Agency for Healthcare Research and Quality (AHRQ) defines a set of conditions (called Prevention Quality Indicators, or 'PQIs') for which hospitalization should be avoidable with proper outpatient health care. High rates of hospitalization for these conditions indicate potential gaps in access to quality outpatient services for community residents. In 2013, residents of the study region had 575 PQI hospital discharges. The leading diagnoses for these discharges were congestive heart failure, chronic obstructive pulmonary disease (COPD) or asthma in older adults, bacterial pneumonia, and diabetes. The PQI discharge rates for the study region were higher than the Virginia statewide rates for congestive heart failure and diabetes. The leading causes of PQI hospitalization in 2013 were generally the same as in the 2011 profile reported in the 2012/2013 CHNA.

- **Behavioral Health Hospitalization Discharge Profile.** Behavioral health hospitalizations provide another important indicator of community health status. In 2013, residents of the study region had 442 hospital discharges from Virginia community hospitals for behavioral health conditions. The leading diagnosis by a large margin for these discharges was affective psychoses. The affective psychoses rate for the study region was higher than the statewide rate. The leading causes of behavioral health hospitalization in 2013 were generally the same as in the 2011 profile reported in the 2012/2013 CHNA.

- **Adult Health Risk Profile.** Local estimates indicate that substantial numbers of adults (age 18+) in the study region have health risks related to nutrition, weight, physical inactivity, tobacco and alcohol. In addition, substantial numbers of adults have chronic conditions such as high cholesterol, high blood pressure, arthritis, diabetes and asthma. The 2014 profile generally reflects the health risk patterns found in 2011 as reported in the 2012/2013 CHNA.

- **Youth Health Risk Profile.** Local estimates indicate that substantial numbers of youth (age 10-19) in the study region have health risks related to nutrition, weight, alcohol, mental health, tobacco, and physical inactivity. The 2014 profile generally reflects the health risk patterns found in 2011 as reported in the 2012/2013 CHNA.

- **Uninsured Profile.** At any given point in time in 2014, an estimated 8,717 nonelderly residents of the study region were uninsured. This included an estimated 1,142 children and 7,576 adults. The estimated uninsured rates were 9 percent for children age 0-18, 21 percent for adults age 19-64, and 18 percent for the population age 0-64. The estimated uninsured rate for the population under 65 is generally comparable to the estimated rate in 2011 as reported in the 2012/2013 CHNA.

- **Medically Underserved Profile.** Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) are designated by the U.S. Health Resources and Services Administration as being at-risk for health care access problems. The designations are based on several factors including primary care provider supply, infant mortality, prevalence of poverty, and the prevalence of seniors age 65+. All seven localities that overlap with the study region

have been designated as medically underserved areas (Essex, King and Queen, King William, Lancaster, Northumberland, Richmond and Westmoreland counties). This has not changed from the 2012/2013 CHNA.

Demographic Profile

Trends in health-related demographics are instructive for anticipating changes in community health status. Changes in the size, age and racial/ethnic mix of the population can have a significant impact on overall health status, health needs and demand for local services.

As shown in *Exhibit II-1*, as of 2014, the study region included an estimated 62,444 people. The total population is projected to increase slightly by 2019. Focusing on age, declines are expected in the 0-17 and 30-64 populations; The 18-29 and 65+ populations are expected to increase. Focusing on racial/ethnic background, growth is projected for all of the listed groups.

Exhibit II-1
Health Demographic Trend Profile for the Study Region, 2010-2019

Indicator	2010 Census	2014 Estimate	2019 Projection	% Change 2014-2019
Total Population	62,505	62,444	64,444	3%
Population Density (per Sq. Mile)	47.1	47.1	48.6	3%
Total Households	25,322	25,365	26,322	4%
Population by Age				
Children Age 0-17	12,305	12,068	11,979	-1%
Adults Age 18-29	7,586	7,733	8,070	4%
Adults Age 30-44	10,373	9,947	9,894	-1%
Adults Age 45-64	19,389	19,138	18,552	-3%
Seniors Age 65+	12,854	13,558	15,945	18%
Population by Race/Ethnicity				
Asian	307	372	409	10%
Black/African American	18,990	18,789	19,590	4%
White	40,753	40,639	41,387	2%
Other or Multi-Race	2,460	2,645	3,053	15%
Hispanic Ethnicity	2,196	2,402	2,749	14%

Note: Hispanic is a classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.

Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Community health is driven in part by community demographics. The age, sex, race, ethnicity, income and education status of a population are strong predictors of community health status and community health needs.

Exhibit II-2 presents a snapshot of key health-related demographics of the study region. As of 2014, the study region included an estimated 62,444 people. Focusing on population rates as shown in the lower part of the Exhibit, compared to Virginia as a whole, the study region is more rural, older, and has proportionally more Black / African American residents. The study region also has a higher percentage of

lower income households and education levels than Virginia as a whole. These comparative patterns were also seen in the 2012/2013 CHNA. *Note: Maps 1-13 in Appendix A (pages 35 - 41) show the geographic distribution of the population by zip code.*

Exhibit II-2
Health Demographic Snapshot Profile, 2014

Indicator		Study Region	Virginia
Population Counts			
Total Population	Population	62,444	8,282,921
Age	Children Age 0-17	12,068	1,889,338
	Adults Age 18-29	7,733	1,417,141
	Adults Age 30-44	9,947	1,678,713
	Adults Age 45-64	19,138	2,241,450
	Seniors Age 65+	13,558	1,056,279
Sex	Female	31,521	4,214,922
	Male	30,928	4,067,999
Race	Asian	372	486,905
	Black/African American	18,789	1,602,827
	White	40,639	5,616,313
	Other or Multi-Race	2,645	576,876
Ethnicity	Hispanic Ethnicity	2,402	705,701
Income	Low Income Households (Households with Income < $25,000)	6,420	594,210
Education	Population Age 25+ Without a High School Diploma	8,288	662,369
Population Rates			
Total Population	Population Density (pop. per sq. mile)	47.1	206.1
Age	Children Age 0-17 pct. of Total Pop.	19%	23%
	Adults Age 18-29 pct. of Total Pop.	12%	17%
	Adults Age 30-44 pct. of Total Pop.	16%	20%
	Adults Age 45-64 pct. of Total Pop.	31%	27%
	Seniors Age 65+ pct. of Total Pop.	22%	13%
Sex	Female pct. of Total Pop.	50%	51%
	Male pct. of Total Pop.	50%	49%
Race	Asian pct. of Total Pop.	1%	6%
	Black/African American pct. of Total Pop.	30%	19%
	White pct. of Total Pop.	65%	68%
	Other or Multi-Race pct. of Total Pop.	4%	7%
Ethnicity	Hispanic Ethnicity pct. of Total Pop.	4%	9%
Income	Low Income Households (Households with Income <$25,000) pct. of Total Households	25%	19%
Education	Pop. Age 25+ Without a High School Diploma pct. of Total Pop. Age 25+	18%	12%

Note: Hispanic is a classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.

Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Mortality Profile

Mortality is one of the most commonly cited community health indicators. As shown in *Exhibit II-3*, in 2013, the study region had 714 total deaths. The leading causes of death were malignant neoplasms (cancer) (168), heart disease (155), and cerebrovascular diseases (61). Study region death rates were higher than the statewide rates for all deaths combined, and for malignant neoplasms, heart disease, chronic lower respiratory diseases, and cerebrovascular diseases deaths. *Note: Maps 14-17 in Appendix A (pages 41-43) show the geographic distribution of deaths by zip code.*

The 2013 mortality profile presented *Exhibit II-3* is generally comparable to the 2010 mortality profile reported in the 2012/2013 CHNA. Cancer, heart disease and cerebrovascular diseases were also the three leading causes of death in 2010 as reported in the 2012/2013 CHNA.

Exhibit II-3
Mortality Profile, 2013

Indicator	Study Region	Virginia
Total Deaths		
Deaths by All Causes	714	62,309
Deaths by Leading 14 Causes		
Malignant Neoplasms	168	14,348
Heart Disease	155	13,543
Cerebrovascular Diseases	61	3,278
Chronic Lower Respiratory Diseases	42	3,168
Unintentional Injury	26	2,794
Alzheimer's Disease	24	1,634
Septicemia	15	1,464
Nephritis and Nephrosis	12	1,547
Chronic Liver Disease	11	836
Primary Hypertension and Renal Disease	11	629
Suicide	10	1,047
Diabetes Mellitus	10	1,618
Influenza and Pneumonia	9	1,430
Parkinson's Disease	7	549
Crude Death Rates per 100,000 Population		
Total Deaths	1,139.6	755.5
Malignant Neoplasms	268.1	174.0
Heart Disease	247.4	164.2
Cerebrovascular Diseases	97.4	39.7
Chronic Lower Respiratory Diseases	67.0	38.4
Unintentional Injury	--	33.9
Alzheimer's Disease	--	19.8
Septicemia	--	17.8
Nephritis and Nephrosis	--	18.8
Chronic Liver Disease	--	10.1
Primary Hypertension and Renal Disease	--	7.6
Suicide	--	12.7
Diabetes Mellitus	--	19.6

Influenza and Pneumonia	--	17.3
Parkinson's Disease	--	6.7
Note: Rates are not calculated where n<30.		
Source: Community Health Solutions analysis of mortality data from the Virginia Department of Health. See Appendix C. Data Sources for details.		

Maternal and Infant Health Profile

Maternal and infant health indicators are another widely cited category of community health. As shown in *Exhibit II- 4A,* the study region had 566 total live births in 2013. Compared to Virginia as a whole, the study region had higher rates of low weight births, births without early prenatal care, non-marital births, and teenage births. *Note: Maps 18-19 in Appendix A (pages 43-44) show the geographic distribution of births by zip code.*

Comparing the 2013 profile in *Exhibit II-4A* to the 2010 profile reported in the 2012/2013 CHNA, the study region rates declined for live births overall, but increased for low weight births, births without early prenatal care and non marital births.

Exhibit II 4A.
Maternal and Infant Health Profile, 2013

Indicators	Study Region	Virginia
Counts		
Total Live Births	566	101,977
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	64	8,178
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks)	125	13,435
Non-Marital Births	296	35,289
Live Births to Teens Age 10-19	45	5,316
Live Births to Teens Age 18-19	36	4,073
Live Births to Teens Age 15-17	9	1,208
Live Births to Teens Age <15	0	35
Rates		
Live Birth Rate per 1,000 Population	9.0	12.3
Low Weight Births pct. of Total Live Births	11%	8%
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks) pct. of Total Live Births	22%	13%
Non-Marital Births pct. of Total Live Births	52%	35%
Live Births to Teens Age 10-19	13.2	10.3
Live Births to Teens Age 18-19	62.6	36.4
Live Births to Teens Age 15-17	7.8	8.0
Live Births to Teens Age <15	0.0	0.1
Source: Community Health Solutions analysis of data from the Virginia Department of Health.		

Exhibit II-4B below provides counts and rates of teen pregnancy and infant mortality for the seven localities that include the study region. The study region rates were higher than the statewide rates for teen pregnancy and five-year infant mortality. Comparing the 2013 profile in *Exhibit II-4B* to the 2010

profile reported in the 2012/2013 CHNA, the study region rates declined for teen pregnancy and for five-year infant mortality.

Exhibit II-4B.

Teen Pregnancy and Infant Mortality, 2013

Indicators	Essex County	King and Queen County	King William County	Lancaster County	Northumberland County	Richmond County	Westmoreland County	Study Region	Virginia
Teen Pregnancy Counts and Rates									
Total Teenage (age 10-19) Pregnancies (2013)	7	8	14	8	13	7	23	80	7,447
Teenage (age 10-19) Pregnancy Rate per 1,000 Teenage Female Population (2013)	10.1	20.7	13.7	16.9	25.6	16.7	25.5	18.2	14.4
Infant Mortality Counts and Rates									
Total Infant Deaths (2009-2013)	7	1	9	3	4	3	6	33	3,402
Five-Year Infant Mortality Rate per 1,000 Live Births (2009-2013)	10.4	3.3	9.2	7.1	8.2	8.2	6.4	7.9	6.6

Note: Indicators are shown at the city and county level because teen pregnancy and five-year average infant mortality data are not available at the zip code level.

Source: Community Health Solutions analysis of data from the Virginia Department of Health

Preventable Hospitalization Discharge Profile

The Agency for Healthcare Research and Quality (AHRQ) identifies a defined set of conditions (called Prevention Quality Indicators, or 'PQIs') for which hospitalization should be avoidable with proper outpatient health care. High rates of hospitalization for these conditions indicate potential gaps in access to quality outpatient services for community residents.

As shown in *Exhibit II-5*, residents of the study region had 575 PQI hospital discharges in 2013. The leading diagnoses for these discharges were congestive heart failure (148), chronic obstructive pulmonary disease (COPD) (98), bacterial pneumonia (87) and diabetes (85). The PQI discharge rates for the study region were higher than the Virginia statewide rates for congestive heart failure and diabetes. *Note: Map 20 in Appendix A (page 44) shows the geographic distribution of Total PQI Discharges by zip code.*

The leading causes of PQI hospitalization in 2013 were generally the same as in the 2011 profile reported in the 2012/2013 CHNA. A more detailed analysis of ranks and rates between the two study years is not feasible due to changes in diagnostic definitions and other technical factors.

Exhibit II-5
Prevention Quality Indicator (PQI) Hospital Discharge Profile, 2013

Indicator	Study Region	Virginia
Total PQI Discharges		
Total PQI Discharges	575	76,860
PQI Discharges by Diagnosis		
Congestive Heart Failure	148	18,239
COPD or Asthma in Older Adults	98	16,026
Bacterial Pneumonia	87	11,867
Diabetes	85	9,938
Urinary Tract Infection	62	8,452
Dehydration	53	7,743
Hypertension	20	2,768
Perforated Appendix	12	1,189
Angina	8	941
Asthma in Younger Adults	5	444
Crude Rates per 100,000 Population		
Total PQI Discharges	917.8	932.0
Congestive Heart Failure	236.2	221.2
COPD or Asthma in Older Adults	156.4	194.3
Bacterial Pneumonia	138.9	143.9
Diabetes	135.7	120.5
Urinary Tract Infection	99.0	102.5
Dehydration	84.6	93.9
Hypertension	--	33.6
Perforated Appendix	--	14.4
Angina	--	11.4
Asthma in Younger Adults	--	5.4

Note: -- Rates are not calculated where n<30. The sum of the individual diagnoses may differ slightly from the Total PQI Discharges figure for technical reasons. See Appendix C for details.

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc. and local demographic estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Behavioral Health Hospitalization Discharge Profile

Behavioral health (BH) hospitalizations provide another important indicator of community health status. As shown in *Exhibit II-6,* residents of the study region had 442 hospital discharges from Virginia community hospitals for behavioral health conditions in 2013. The leading diagnosis for these discharges was affective psychoses (214). The affective psychoses rate for the study region was higher than the

statewide rate. *Note: Map 21 in Appendix A (page 45) shows the geographic distribution of BH discharges by zip code.*

The leading causes of behavioral health hospitalization in 2013 were generally the same as in the 2011 profile reported in the 2012/2013 CHNA. A more detailed analysis of ranks and rates between the two study years is not feasible due to changes in diagnostic definitions and other technical factors.

Exhibit II-6
Behavioral Health Hospital Discharge

Indicator	Study Region	Virginia
BH Discharges		
Total BH Discharges by All Diagnoses	442	60,600
BH Discharges by Leading 15 Diagnoses		
Affective Psychoses	214	26,709
Schizophrenic Disorders	24	8,136
Adjustment Reaction	23	2,271
Alcoholic Psychoses Discharges	22	4,037
Other Organic Psychotic Conditions-Chronic	20	795
Depressive Disorder, Not Elsewhere Classified	19	3,503
Senility Without Mention of Psychosis	19	1,688
Alcohol Dependence Syndrome	14	2,391
Neurotic Disorders	13	1,207
Drug Psychoses	13	2,121
Other Nonorganic Psychoses	11	2,133
Altered Mental Status	10	1,000
Symptoms Involving Head or Neck	9	933
Drug Dependence	2	816
Non Dependent Abuse of Drugs	1	600
Crude Rates per 100,000 Population		
Total Behavioral Health (BH) Discharges	705.5	734.8
Affective Psychoses	341.6	323.9
Schizophrenic Disorders	--	98.7
Adjustment Reaction	--	27.5
Alcoholic Psychoses Discharges	--	49.0
Other Organic Psychotic Conditions-Chronic	--	9.6
Depressive Disorder, Not Elsewhere Classified	--	42.5
Senility Without Mention of Psychosis	--	20.5
Alcohol Dependence Syndrome	--	29.0
Neurotic Disorders	--	14.6
Drug Psychoses	--	25.7
Other Nonorganic Psychoses	--	25.9
Altered Mental Status	--	12.1
Symptoms Involving Head or Neck	--	11.3
Drug Dependence	--	9.9
Non Dependent Abuse of Drugs	--	7.3

Note: Rates are not calculated where n<30.

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix C. Rates are not calculated where n<30.

Adult Health Risk Profile

This section examines health risks for adults age 18+. Prevalence estimates of health risks, chronic disease and health status can be useful in developing prevention and improvement efforts. As shown in *Exhibit II-7*, estimates from 2014 indicate that substantial numbers of adults in the study region have health risks related to nutrition, weight, physical inactivity, tobacco and alcohol. In addition, substantial numbers of adults have chronic conditions such as high cholesterol, high blood pressure, arthritis, diabetes and asthma. The 2014 profile generally reflects the health risk patterns found in 2011 as reported in the 2012/2013 CHNA. Available data are not sufficient to support a more detailed comparative analysis between the two study years. *Note: Maps 22-25 in Appendix A (page 45-47) show the geographic distribution of selected adult health risks by zip code.*

Exhibit II-7
Adult Health Risk Factor Profile (Estimates), 2014

Indicator		Study Region
Count (Estimates)		
Estimated Adults age 18+		*50,376*
Risk Factors	Not Meeting Guidelines for Fruit and Vegetable Intake	41,194
	Overweight or Obese	32,346
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	24,735
	Smoker	8,612
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	8,104
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	18,043
	High Blood Pressure (told by a doctor or other health professional)	15,464
	Arthritis (told by a doctor or other health professional)	12,534
	Diabetes (told by a doctor or other health professional)	5,344
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	10,576
	Fair or Poor Health Status	8,297
Percent (Estimates)		
Risk Factors	Not Meeting Guidelines for Fruit and Vegetable Intake	82%
	Overweight or Obese	64%
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	49%
	Smoker	17%
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	16%
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	36%
	High Blood Pressure (told by a doctor or other health professional)	31%
	Arthritis (told by a doctor or other health professional)	25%
	Diabetes (told by a doctor or other health professional)	11%
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	21%
	Fair or Poor Health Status	16%

Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Youth Health Risk Profile

This section examines selected health risks for youth age 10-19. These risks have received increasing attention as the population of American children has become more sedentary, more prone to unhealthy eating and more likely to develop unhealthy body weight. The long-term implications of these trends are serious, as these factors place children at higher risk for chronic disease both now and in adulthood.

As shown in *Exhibit II-8,* estimates from 2014 indicate that substantial numbers of youth in the study region have health risks related to nutrition, weight, alcohol, mental health, tobacco, and physical activity. The 2014 profile generally reflects the health risk patterns found in 2011 as reported in the 2012/2013 CHNA. Available data are not sufficient to support a more detailed comparative analysis between the two study years. *Note: Map 26 in Appendix A (page 47) shows the geographic distribution of youth overweight or obese by zip code.*

Exhibit II-8
Youth Health Risk Factor Profile (Estimates), 2014

Indicator	Study Region
Counts (Estimates)	
High School Youth Age 14-19	
Total Estimated High School Youth Age 14-19	*4,139*
Not Meeting Guidelines for Fruit and Vegetable Intake	3,800
Overweight or Obese	1,181
Not Meeting Recommendations for Physical Activity in the Past Week	2,286
Used Tobacco in the Past 30 Days	756
Had at least One Drink of Alcohol At least One Day in the Past 30 Days	1,123
Felt Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	1,008
Middle School Youth Age 10-14	
Total Estimated Middle School Youth Age 10-14	*1,677*
Not Meeting Guidelines for Fruit and Vegetable Intake	1,272
Not Meeting Recommendations for Physical Activity in the Past Week	1,101
Used Tobacco in the Past 30 Days	40
Percent (Estimates)	
High School Youth Age 14-19	
Not Meeting Guidelines for Fruit and Vegetable Intake	92%
Overweight or Obese	29%
Not Meeting Recommendations for Physical Activity in the Past Week	55%
Used Tobacco in the Past 30 Days	18%
Had at least One Drink of Alcohol At least One Day in the Past 30 Days	27%
Felt Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	24%
Middle School Youth Age 10-14	
Not Meeting Guidelines for Fruit and Vegetable Intake	76%
Not Meeting Recommendations for Physical Activity in the Past Week	66%
Used Tobacco in the Past 30 Days	2%

Source: Estimates produced by Community Health Solutions using Virginia Youth Risk Behavioral Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Uninsured Profile

Decades of research show that health coverage matters when it comes to overall health status, access to health care, quality of life, school and work productivity, and even mortality. *Exhibit II-9* shows the estimated number of uninsured individuals by income in the study region as of 2014. At a given point in time in 2014, an estimated 8,717 nonelderly residents of the study region were uninsured, including 1,142 children and 7,576 adults. The estimated uninsured rates were nine percent for children age 0-18, 21 percent for adults age 19-64, and 18 percent for the population age 0-64. The estimated uninsured rate for the population under 65 is generally comparable to the estimated rate in 2011 as reported in the 2012/2013 CHNA. Available data are not sufficient to support a more detailed comparative analysis between the two study years. *Note: Maps 27-28 in Appendix A (page 48) show the geographic distribution of the uninsured population by zip code.*

Exhibit II-9
Uninsured Profile (Estimates), 2014

Indicator	Study Region
Estimated Uninsured Counts*	
Uninsured Nonelderly Age 0-64	8,717
Uninsured Children Age 0-18	1,142
Uninsured Children Age 0-18 <=138% FPL	370
Uninsured Children Age 0-18 <=200% FPL	573
Uninsured Children Age 0-18 <=250% FPL	704
Uninsured Children Age 0-18 <=400% FPL	936
Uninsured Children Age 0-18 138-400% FPL	566
Uninsured Adults Age 19-64	7,576
Uninsured Adults Age 19-64 <=138% FPL	2,774
Uninsured Adults Age 19-64 <=200% FPL	4,068
Uninsured Adults Age 19-64 <=250% FPL	4,904
Uninsured Adults Age 19-64 <=400% FPL	6,355
Uninsured Adults Age 19-64 138-400% FPL	3,580
Estimated Uninsured Percent	
Children Age 0-18	9%
Adults Age 19-64	21%
Population Age 0-64	18%

Note: Federal poverty level (FPL) categories are cumulative.

Source: Estimates produced by Community Health Solutions using U.S. Census Bureau Small Area Health Insurance Estimates (2014) and local demographic estimates from Alteryx, Inc. See Appendix C for details on methods.

Medically Underserved Profile

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) are designations used by the U.S. Health Resources and Services Administration to identify populations at-risk for health care access problems. The designations are based on several factors including primary care provider supply, infant mortality, prevalence of poverty and the prevalence of seniors age 65+.

As shown in *Exhibit II-10*, all seven localities that overlap with the zip code study region have been partially or fully designated as MUAs/MUPs (Essex, King and Queen, King William, Lancaster, Northumberland, Richmond and Westmoreland counties). This has not changed from the 2012/2013 CHNA. For a more detailed description, visit the U.S. Health Resources and Service Administration designation webpage at http://muafind.hrsa.gov/.

Exhibit II-10
Medically Underserved Areas Profile

Locality	MUA/MUP Designation	Census Tracts
Essex County	Full	3 of 3 census tracts
King and Queen County	Full	2 of 2 census tracts
King William County	Full	4 of 4 census tracts
Lancaster County	Full	3 of 3 census tracts
Northumberland County	Full	3 of 3 census tracts
Richmond County	Full	2 of 2 census tracts
Westmoreland County	Full	4 of 4 census tracts

Source: Community Health Solutions analysis of U.S. Health Resources and Services Administration data.

Community Input

In an effort to obtain community input for the study, a *Community Survey* was conducted with a broad-based group of community stakeholders identified by Riverside Tappahannock Hospital. The survey participants were asked to provide their viewpoints on:

- Important health concerns in the community
- Significant service gaps in the community
- Vulnerable/at-risk populations in the community
- Vulnerable/at-risk geographic regions in the community
- Health assets within the community
- Health assets needed in the community
- Additional ideas or suggestions for improving community health

In an effort to broaden participation in the survey compared to the previous CHNA study in 2012/2013, RTH sent the survey to many more people for the 2016 CHNA. The survey was sent to a group of 213 community stakeholders. The community stakeholder list included representatives from public health, education, social services, business, local government and local civic organizations, among others. Riverside Tappahannock Hospital staff conducted outreach for community input via email, through personal phone calls, and in-person at local events and meetings. A total of 47 stakeholders (22%) submitted a response (although not every respondent answered every question).

- **Community Health Concerns.** Respondents identified more than 40 specific health concerns, with the most commonly mentioned being mental health conditions, obesity, cancer, high blood pressure/hypertension, heart disease, and diabetes. These concerns, along with dental care/oral health and Alzheimer's Disease, were also the most commonly identified concerns in the 2012/2013 survey.

- **Community Service Gaps.** Respondents identified more than 30 specific community service gaps, with the most commonly mentioned being mental health services, substance abuse services, aging services, specialty medical care, and primary medical care services. These services, as well as dental/oral health services and health care coverage, were also the most commonly identified service gaps in the 2012/2013 survey.

- **Vulnerable or At-Risk Populations.** Respondents identified a variety of vulnerable/at-risk populations in the community including children; the elderly; ethnic/racial minorities; homeless; low income population; population with behavioral health conditions; population without access to healthcare services; population without transportation; the uninsured/underinsured; and other populations with particular health concerns. Respondents also identified vulnerable/at-risk neighborhoods or geographic regions in the community, including isolated areas, and particular neighborhoods across the Northern Neck/Middle Peninsula.

- **Health Assets in the Community.** Respondents identified diverse health assets in the community including biking and walking trails; community healthcare providers; faith-based

organizations; free clinics; natural environment; community outreach programs; recreational facilities; and Riverside Health System.

- **Health Assets Needed in the Community.** Respondents identified health assets that could use enhancement, such as biking and walking trails; equal access to natural resources; parks and recreational facilities; primary medical care services; mental health services; nutritional support services; and specialty medical care.

- **Additional Ideas and Suggestions.** Respondents offered a variety of ideas and suggestions for improving community health. Ideas and suggestions included community coordination; education and prevention; improving access to healthcare services; resources for the low income population; and resources for the elderly population.

Survey Respondents

Exhibit I-1 below lists the organizational affiliations of the survey respondents.

Exhibit I-1
Reported Organization Affiliation of Survey Respondents

4-H	Middle Peninsula Northern Neck Community Services Board
Bay Aging	NAACP
Colonial Beach Public Schools	Northern Neck Middlesex Free Health Clinic
Commonwealth Pain Specialists	Northumberland Department of Social Services
Essex County Department of Social Services	Peoples Community Bank
Essex County Public Schools (2)	Richmond County Board of Supervisors
Essex County Sheriff's Office	Richmond County Public Schools
EVB/ Warsaw Town Councilman	Richmond County Social Services
First Baptist Church Loretto	Riverside Medical Group (7)
King William Board of Supervisors	Riverside Health System Hospitals (8)
King William County (2)	The Orchard-Riverside Health System
Lancaster Board of Supervisors	Three Rivers Health District
Lancaster County Emergency Services	Town of Tappahannock
Lancaster County Public Schools	Two Rivers Communications
Lancaster County Social Services	Westmoreland County
Ledwith – Lewis Free Clinic	Westmoreland County Board of Supervisors

Community Health Concerns

Survey respondents were asked to review a list of common community health issues. The list of issues draws from the topics in *Healthy People 2020* with some refinements. The survey asked respondents to identify from the list what they view as important health concerns in the community. Respondents were also invited to identify additional issues not already defined on the list. As shown in Exhibit I-2, respondents identified more than 40 specific health concerns, with the most commonly mentioned being mental health conditions, obesity, cancer, high blood pressure / hypertension, heart disease and diabetes. These conditions were also among the most commonly identified concerns in the 2012/2013 survey.

Exhibit I-2
Important Community Health Concerns Identified by Survey Respondents

Note: All 49 respondents answered this question. When interpreting the survey results, please note that although the relative number of responses received for each item is instructive, it is not a definitive measure of the relative importance of one issue compared to another.

Answer Options	Response Percent	Response Count
Mental Health - Non-Substance Abuse Behavioral Health Conditions (e.g. depression, anxiety, etc.)	80%	37
Mental Health - Substance Abuse (prescription or illegal drugs)	76%	35
Obesity	76%	35
Cancer	72%	33
High Blood Pressure / Hypertension	72%	33
Heart Disease	70%	32
Diabetes	67%	31
Mental Health - Intellectual/Developmental Disabilities	65%	30
Alcohol Use	63%	29
Dementia / Alzheimer's Disease	63%	29
Tobacco Use	61%	28
Chronic Pain	50%	23
Violence – Domestic Violence	50%	23
Stroke	48%	22
Dental / Oral Health Care	44%	20
Respiratory Diseases (e.g. asthma, COPD, etc.)	44%	20
Orthopedic Problems	41%	19
Accidents / Injuries	37%	17
Bullying	37%	17
Teen Pregnancy	35%	16
Prenatal and Pregnancy Care	33%	15
Renal (kidney) Disease	33%	15
Physical Disabilities	28%	13
Sexually Transmitted Diseases	28%	13
Arthritis	24%	11
Autism	24%	11
Drowning / Water Safety	24%	11
Hunger	24%	11
Infectious Diseases	24%	11
Violence – Other than domestic violence	24%	11
Neurological Conditions (e.g. seizures, multiple sclerosis, traumatic brain injury, etc.)	20%	9
Environmental Health (e.g. pollution, mosquito control, water quality, etc.)	17%	8
HIV/AIDS	13%	6
Other Health Problems (see responses on the following page)	4%	2

Exhibit I-2
Important Community Health Concerns Identified by Survey Respondents (continued)

Response #	Other Health Concerns (Open-Ended Reponses)
1	• Poverty • Lack of access to health care resources • Lack of health literacy
2	• Lack of a close pharmacy

Community Service Gaps

Survey respondents were asked to review a list of community services that are typically important for addressing the health needs of a community. Respondents were asked to identify from the list any services they think need strengthening in terms of availability, access or quality. Respondents were also invited to identify additional service gaps not already defined on the list.

As shown in Exhibit I-3, respondents identified more than 30 specific community service gaps, with the most commonly mentioned being mental health services, substance abuse services aging services, specialty medical care and primary care medical services. Next in order were healthy lifestyle support, health insurance coverage, specialty medical care and transportation. These services, as well as dental / oral health services and health care coverage, were also the most commonly identified service gaps in the 2012/2013 survey.

Exhibit I-3
Important Community Service Gaps Identified by Survey Respondents

Note: 46 of 47 respondents answered this question. When interpreting the survey results, please note that although the relative number of responses received for each item is instructive, it is not a definitive measure of the relative importance of one issue compared to another.

Answer Options	Response Percent	Response Count
Mental Health Services - Non Substance Use Behavioral Health Services	80%	37
Mental Health Services - Substance Use Services	65%	30
Substance Abuse Services	63%	29
Aging Services	61%	28
Specialty Medical Care Services (e.g. cardiologists, pulmonologists, etc.)	59%	27
Primary Medical Care Services	59%	27
Mental Health Services - Intellectual/Developmental Disabilities	59%	27
Cancer Services (e.g. screening, diagnosis, treatment, etc.)	57%	26
Transportation Services	54%	25
Chronic Pain Management Services	52%	24
Healthy Lifestyle Support (e.g. nutrition, exercise, etc.)	50%	23
Dental / Oral Health Care Services	46%	21
Chronic Disease Services (e.g. diabetes, high blood pressure, etc.)	44%	20
Long Term Care Services	44%	20
Health Care Insurance Coverage	39%	18
Health Promotion and Prevention Services	39%	18
Early Intervention Services for Children	37%	17

Continued on the following page

Maternal, Infant and Child Health Services	37%	17
Services for Vulnerable Populations (e.g. uninsured/underinsured, migrant workers, homeless, etc.)	37%	17
Domestic Violence Services	35%	16
Home Health Services	30%	14
School Health Services	30%	14
Social Services	30%	14
Hospital Services (e.g. inpatient, outpatient, emergency care, etc.)	28%	13
Veterans Services	28%	13
Family Planning Services	26%	12
Pharmacy Services	24%	11
Public Health Services	24%	11
Public Safety Services	24%	11
Hospice Services	20%	9
Food Safety Net (e.g. food bank, community gardens, school lunches, etc.)	17%	8
Workplace Health and Safety Services	13%	6
Physical Rehabilitation	11%	5
Environmental Health Services	9%	4
Other Services (see responses below)	4%	2

Response #	Other Service Gaps (Open-Ended Reponses)
1	• Lack of volunteers for EMS and few number of stations for size of county [equals] long response time at best and often no response
2	• Community has a large aging population. Need better service soon for in home care and care for indigent. Those who cannot afford to pay for assisted living but need the service.

Vulnerable and At-Risk Populations or Geographic Regions in the Community

Survey respondents were asked if there are particular populations within the community who are vulnerable/at-risk for health concerns or difficulties obtaining health services. Respondents were also asked if there are particular neighborhoods or geographic regions within the community where residents may be vulnerable/at-risk for health concerns or difficulties obtaining health services. Identified populations and regions include the following. Please see *Appendix B (page 51)* for a detailed listing. These survey items were not included in the 2012/2013 survey.

- Children
- Elderly
- Ethnic/Racial Minorities
- Homeless
- Low Income
- Migrant Workers
- Residents with Behavioral Health Conditions
- Residents without access to healthcare services
- Residents of particular neighborhoods (see *Appendix B*)
- Residents without Transportation
- Residents in Isolated Areas
- Uninsured/Underinsured

Health Assets in the Community

Survey respondents were asked to identify health assets within the community that promote a culture of health. *Exhibit I-4* summarizes the results. Respondents were also asked to identify health assets that the community needs, but may be lacking.

Exhibit I-4
Health Assets in the Community as Identified by Survey Respondents

Existing Assets that Promote a Culture of Health	Assets the Community Needs, but May be Lacking
• Biking and Walking Trails • Community Outreach Programs • Faith-Based Organizations • Free Clinics • Natural Environment • Primary Care Practices • Recreational Facilities • Riverside Health System	• Biking and Walking Trails • Equal Access to Natural Resources • Parks and Recreation Facilities • Primary Medical Services • Mental Health Services • Nutritional Support Services • Specialty Medical Services

Note: Please see *Appendix B* (page 45) for a more detailed analysis of responses to the *Community Survey*.

Additional Ideas and Suggestions

Survey respondents offered open-ended responses with additional ideas and suggestions for improving community health. Common themes are listed below, and detailed responses are listed in *Appendix B (page 51)*.

- Community Coordination
- Education and Prevention
- Improving Access to Healthcare Services
- Resources for the Low Income Population
- Resources for the Elderly Population

Progress Made From the 2013 Implementation Plan

An important component of the 2016 CHNA is to review the work accomplished since the 2013 Implementation Plan. There were five key focus areas as a part of the 2013 Implementation Plan for the Northern Neck.

- ***Awareness of Healthcare Resources:*** Awareness and Navigation of Resources was identified as a key issue with many individuals unaware of existing services and resources available on the Northern Neck. As a part of the implementation plan, Riverside has participated in the Regional Resource Council and has added Riverside's listings to the northerneckconnection.org. Riverside also updated the Riverside Tappahannock Hospital directory of services.

- ***Awareness of Social and Mental Health Services:*** Awareness of social and mental health services was also identified as a concern. Riverside continued to work with northerneckconnecgtion.org to help identify resources and facilitate connections.

- ***Transportation and Access to Services***: Transportation and its role in accessing services was identified as a third critical area. Riverside worked with Bay Transit ensure that fixed routes were added to facilitate access to key locations, such as the hospital and the free clinic.

- ***Health Literacy:*** Opportunities to address health literacy were identified in both the Middle Peninsula and Northern Neck areas. RWRH, RTH and Three Rivers Health District worked together to assess the REALM tool. RWRH and RTH also reviewed the HEAL tool.

- ***Wellness:*** The opportunity to improve community members' long term health through education about healthy lifestyle choices was also a focus area. Since 2013, local organizations have collaborated to implement healthy lifestyle education programs. Additionally, area groups worked together to explore programs such as local walking clubs.

The hospital made every effort to solicit feedback from the community by providing a feedback mechanism on the hospital's website. However, at the time of this publication, no written feedback had been received on the 2013 CHNA and Implementation Plan.

Prioritization of the 2016 Significant Health Needs

In order to appropriately review the health indicator data and community survey input, a group of key community stakeholders came together on August 17, 2016 at the Middlesex County Public Meeting Room. It was determined that a joint action plan between the Middle Peninsula and Northern Neck regions would

be appropriate, as the same organizations serve both regions. The meeting reflected key stakeholders from both the Middle Peninsula and Northern Neck Regions, as many organizations serve both areas. Participants included: Three Rivers Health District, Middlesex County Social Services, Community Services Board, Bay Agency on Aging, Alzheimer's Association, Gloucester Mathews Free Clinic, King William Behavioral Health, Riverside Walter Reed Hospital, Riverside Tappahannock Hospital, Riverside Complex Care, Riverside Orchard and Riverside Medical Group.

The group reviewed the demographic and health indicator data as well as the community survey results. Additionally, there was a review and discussion of the 2013 CHNA Implementation Plans and the work that had been accomplished. There were multiple discussions about what the data actually reflected in the community, and which efforts had been working.

The prioritization was done by a voting process, with everyone except Liz Williams and Carrie Schmidt (the facilitators) participating. Health needs that could be voted for included the four focus areas from the 2013 CHNA Implementation Plan, top health issues from the 2016 health indicator data, top health concerns from the 2016 survey, and any additional issues the group wanted to add. Each participant was given three stickers and asked to place them on the issue(s) they felt were the most important. Individuals could place as many stickers on one issue as they wanted.

2013 CHNA Focus Areas	**2016 Top Health Indicator Issues**	**2016 Top Health Concerns from the Survey**	**Additional Issues from Group**
• Awareness and Navigation of Resources • Resource Collaboration Around Care of Diabetics • Resource Collaboration Around Care Transitions • Alzheimer's and Dementia • Transportation and Access to Services • Wellness	• Cancer • Heart Disease • Stroke • Chronic Lower Respiratory Conditions • Unintentional Injury • Alzheimer's • Septicemia • Nephritis	• Mental Health (Substance Abuse and Non Substance Abuse) • Dementia and Alzheimer's • High Blood Pressure / Hypertension • Obesity • Cancer • Alcohol Use • Diabetes • Domestic Violence • Heart Disease • Mental Health (Intellectual Disabilities) • Tobacco Use • Aging Services • Specialty Medical Services	• Housing • Transitional Care • Economic Development / Jobs

		• Primary Care Services • Transportation • Chronic Pain Management • Healthy Lifestyle Support	

Results of the prioritization exercise were as follows (If the need is not listed, it received less than four votes):

Health Need	**Number of Votes**
Mental Health (Substance Abuse and Non Substance Abuse combined)	20
Healthy Lifestyle Issues (Obesity, Tobacco, Diabetes, Healthy Living)	8
Healthy Aging	7
Transportation	5
Housing	5
Transitional Care	4
Chronic Pain	4

This identified the top three areas of focus as:

1. Mental Health
2. Healthy Lifestyle / Obesity
3. Healthy Aging

These three areas are also impacted by two key foundational issues:

1. Transportation
2. Housing

IMPLEMENTATION STRATEGY

Strategy Process for Addressing Prioritized Health Needs

Following the prioritization of the health needs by the community stakeholder group, the next step was to develop an implementation strategy to impact these concerns in the community. In order to not duplicate existing efforts already underway, the group met again on September 15, 2016. The group then heard overviews of three key areas as well as an overview of both transportation and housing, which were considered to be critical components for a healthy community. Each presentation touched on the current state of focus in their area, the future vision and obstacles faced. Following the presentations, the group had some significant discussion about the five focus areas and what additional work, if any, could be done to advance the efforts.

Through the conversation around the existing efforts, the team determined that the existing plans for addressing the key areas were strong, and that it was important to support the different community partners' efforts currently underway instead of creating parallel work plans for mental health, healthy lifestyle / obesity / diabetes, housing and transportation.

Significant Health Needs To Be Addressed

- Mental Health
- Healthy Lifestyle / Obesity / Diabetes
- Healthy Aging
- Housing
- Transportation

While each of these areas is a prioritized health need, the overall determination of the team was that supporting existing community infrastructure was the most important way to address the needs.

Significant Health Needs Not Being Addressed

Not every need identified in the CHNA process can be addressed as a priority area.

Due to the limitation of resources, the size of the issue and the capacity of the existing organizations to impact the problem, the following issues were not identified as priorities:

- Chronic Respiratory Conditions
- Stroke
- Cancer
- Reproductive health
- Infant mortality

- Hypertension
- Septicemia
- Nephritis
- Unintentional injury
- Domestic violence
- Chronic pain

Additionally, issues that did not rank as top health indicator problems in the quantitative analysis or noted as perceived community health issues in the survey are not going to be addressed as a part of Riverside Tappahannock Hospital's 2016 CHNA and Implementation Strategy. Examples of these areas include:

- Environmental Health
- Drowning / Water Safety
- Autism
- HIV / AIDS
- Dental / Oral Care
- Neurological Problems
- Arthritis
- Hunger
- Renal Disease
- Orthopedic Problems
- Sexually Transmitted Diseases
- Violence
- Physical Disabilities
- Bullying

Initial Implementation Strategy

For each area of focus, background information, action steps and anticipated resources are noted.

Mental Health

Background:
As in the rest of the country, mental health is perceived as an underserved health need across the Middle Peninsula and Northern Neck regions. In Virginia, the Community Services Board (CSB) system is charged with serving the uninsured and seriously mentally ill across the commonwealth. Locally, the Middle Peninsula Northern Neck Community Services Board serves the ten county region from Colonial Beach to Gloucester Point. The CSB has identified the three largest obstacles to be a lack of funding, the lack of Medicaid expansion in Virginia ns a lack of qualified staff (and the long term funding to support them).

Action Steps:
Riverside will continue to be supportive of the Community Services Board and other organizations serving the mental health needs of the Eastern Shore population. As opportunities arise, Riverside may partner with the CSB and others to provide training or services to the community. The CSB, Riverside and other community partners were encouraged to continue to participate in the Regional Resource Council in order to facilitate ongoing communications between and among organizations serving the county.

Resources:
Riverside will continue to support and participate with local and state organizations working to address behavioral health issues across the region. Riverside will work with its partners to ensure the Regional Resource Council continues to be an important opportunity for communication and collaboration.

Healthy Lifestyle / Obesity/ Diabetes

Background:
As the health indicator data notes, the population across the Middle Peninsula and Northern Neck regions struggles with obesity and obesity-related conditions, such as hypertension and diabetes. Many initiatives are currently in place to help educate the population about the importance of good nutrition and maintaining a healthy weight. Specifically, the team heard information about the 15 week healthy lifestyle program the CSB presents in the public schools (all except Mathews School District), as well as information from Riverside nutritionists about diabetes programs and pre-diabetes educational classes. The group discussed the issue of food access across the region as well. While there are not food deserts as seen in many regions, there is an issue with maintaining appropriate food stocks in the food pantries for diabetics. One of the key issues identified was the lack of community engagement and attendance at events focused on nutrition, weight loss and healthy lifestyle.

Action Steps:
Community partners will continue to collaborate around the issues of nutrition education, access to healthy food and healthy lifestyle habits. Riverside will continue to offer educational programs, and to support community events, such as Healthy Living Days. While no additional program or initiative will be established under this plan, the groups will continue to explore opportunities to work together to better leverage the resources currently dedicated to the issues.

Resources:
Riverside will continue to work with and support the local organizations focused on these issues in the community. Additionally, Riverside will explore ways to increase community engagement in this issue.

Healthy Aging

Background:
There are multiple programs in the region dedicated to assisting individuals and families with aging issues. Specifically, Bay Agency on Aging facilitates multiple services, including Meals on Wheels, insurance counseling, care transition services and clinical services including home care, adult day care, care management, hospice and respite services. Riverside also works closely with Bay Agency on Aging,

including financial support of programs like the Eastern Virginia Care Transitions Programs, as well as by coordinating closely in individual patients, such as those in Riverside's Complex Care program based in Tappahannock. The Complex Care program offers services such as geriatricians, palliative care and a house calls program. The group also reviewed Alzheimer's programs in the area, but noted that this was not limited to the senior population and did not want to group it among "aging" issues as it would be a disservice to the population facing early-onset Alzheimer's. Again, the major obstacles noted were the lack of Medicaid expansion in Virginia combined with a lack of other funding.

Action Steps:
The group again determined that additional programs and initiatives would not provide added value to the problems at hand. While additional funding and Medicaid expansion would address a lot of issues, the team felt the controllable issue at hand was to promote ongoing collaboration and communication between agencies, providers and organizations. The group acknowledged that the Regional Resource Council was a great way to facilitate these interactions, though realized the group had lost some of its energy.

Resources:
Riverside offered to help re-invigorate the Regional Resource Council as a catalyst for cross-organization communications. How to best do this will be further explored within the structure of that meeting.

Transportation

Background:
Transportation was considered to be a critical community health issue. Without transportation, not only is someone not able to reach medical appointments, but they have limited access to grocery stores, medication and employment opportunities. As in many rural communities, access to public transportation is a challenge across the Middle Peninsula and Northern Neck regions. Bay Transit, operated under Bay Agency on Aging, provides the pubic transportation for the ten county region plus New Kent and Charles City County. While acknowledging that more fixed route services would be ideal, it is currently not feasible as individuals do not have a way to access the main roads (like routes 17 and 33). This forces the use of a para transit / demand and response model. They also operate a Med Carry program, which matches volunteers with individuals needing rides to appointments. Bay Transit is growing as funding allows, with an additional bus added to Middlesex in October, as well as a fixed route between Gloucester Courthouse and Gloucester Point. Bay Transit would like to add additional fixed routes, as well as a route between Gloucester, Tappahannock and Kilmarnock but does not have the funding to do so. Currently, Bay Transit runs 6 am – 6 pm, Monday through Friday. Funding for the program is 50% federal funds, 15% state and 35% local money. Federal funds are only given as a match to local funds. This creates a challenge, as different localities are able to fund transportation at different levels. While one time gifts are welcome, they could not be used to add fixed routes, as that funding source must be sustainable.

Action Steps:
The group recognizes the important role transportation plays in the region and wants to ensure that Bay Transit continues to be a part of community health conversations. Bay Transit is a part of the Regional Resource Council, and again the team felt it was key that this regular interaction of organizations remain an important cornerstone in the community.

Resources:
As noted above, Riverside offered to help re-invigorate the Regional Resource Council as a catalyst for cross-organization communications. How to best do this will be further explored within the structure of that meeting. Riverside will continue to explore with the other participants how reliable transportation could be expanded in the community.

Housing

Background:
Housing had been noted as a critical community health issue as well. Bay Aging, in their CHNA in 2015, also noted housing was a key issue. Specifically, one of the key issues in the Middle Peninsula and Northern Neck regions is the lack of access to safe, affordable rental properties. And, it is even harder to find such properties that are not age-restricted. Notably, while approximately 40% of US households rent, only about 20% of the Middle Peninsula and Northern Neck market is available to rent. Bay Housing, operating as part of Bay Agency on Aging, plays an important role in the local housing market. They facilitate programs that include a weathering program, an indoor plumbing rehabilitation program and an emergency home repair program. All of the programs have a long waiting list. Another program works through Community Development Block Grants to help improve entire neighborhoods. Bay Housing is also the Section 8 Housing Authority in the region. While the wait list has not been opened since 2006, they anticipate that if it were opened, they would receive two to three thousand applicants for the wait list. Finally, Bay Aging also operates age restricted housing communities in the area, but not enough to meet current demand. The group also discussed the impact of homelessness in the area. It was noted that while it is often more visible in urban areas, homelessness is very much present in the Middle Peninsula and Northern Neck region.

Action Steps:
The group recognizes the important role safe and reliable housing plays in the region and wants to ensure that Bay Housing continues to be a part of community health conversations. Again, it was noted that the Regional Resource Council, which also includes Bay Housing, is an important catalyst of key communications between community organizations.

Resources:
As noted above, Riverside offered to help re-invigorate the Regional Resource Council as a catalyst for cross-organization communications. How to best do this will be further explored within the structure of that meeting. Riverside will continue to explore with the other participants how to increase access to safe and reliable housing in the community.

Middle Peninsula/Northern Neck Regional Resource Council

Background:
While this was not initially noted as a focus area, the process of working through the various issues continued to highlight the importance of this existing community asset to the health of the region. The Middle Peninsula / Northern Neck Regional Resource Council was noted as an existing group that had the potential to continue to address all of these issues if attendance and participation was increased. The

group meets regularly, alternating between locations on the Middle Peninsula and the Northern Neck. Various individuals noted that the group had been struggling with attendance, energy and focus. In order to reduce duplication, the group determined that additional conversation and planning should occur under the auspices of the Middle Peninsula Northern Neck Regional Resource Council.

Action Steps:
The next scheduled meeting of the Middle Peninsula Northern Neck Regional Resource Council is in November 2016 in Warsaw at the Bay Transit office. Riverside will participate and bring lunch to the meeting. That group will continue the conversations around how to leverage connections between the existing organizations and programs to better meet the needs of the community.

Resources:
Riverside will continue to participate in Middle Peninsula Northern Neck Regional Resource Council and will explore ways to reinvigorate the group.

Questions, Comments and Copies

To view an electronic copy of this document, please visit www.riversideonline.com/community_benefit.

For questions or comments on this Community Health Needs Assessment and Implementation Plan, please contact Riverside's Marketing, Strategy and Development department at 757-534-7051 or via the comments section on www.riversideonline.com/community_benefit.

To obtain a paper copy, please visit the Administration Department of Riverside Tappahannock Hospital's Administration Department or call 757-534-7051.

APPENDIX A. Zip Code-Level Maps for the Study Region

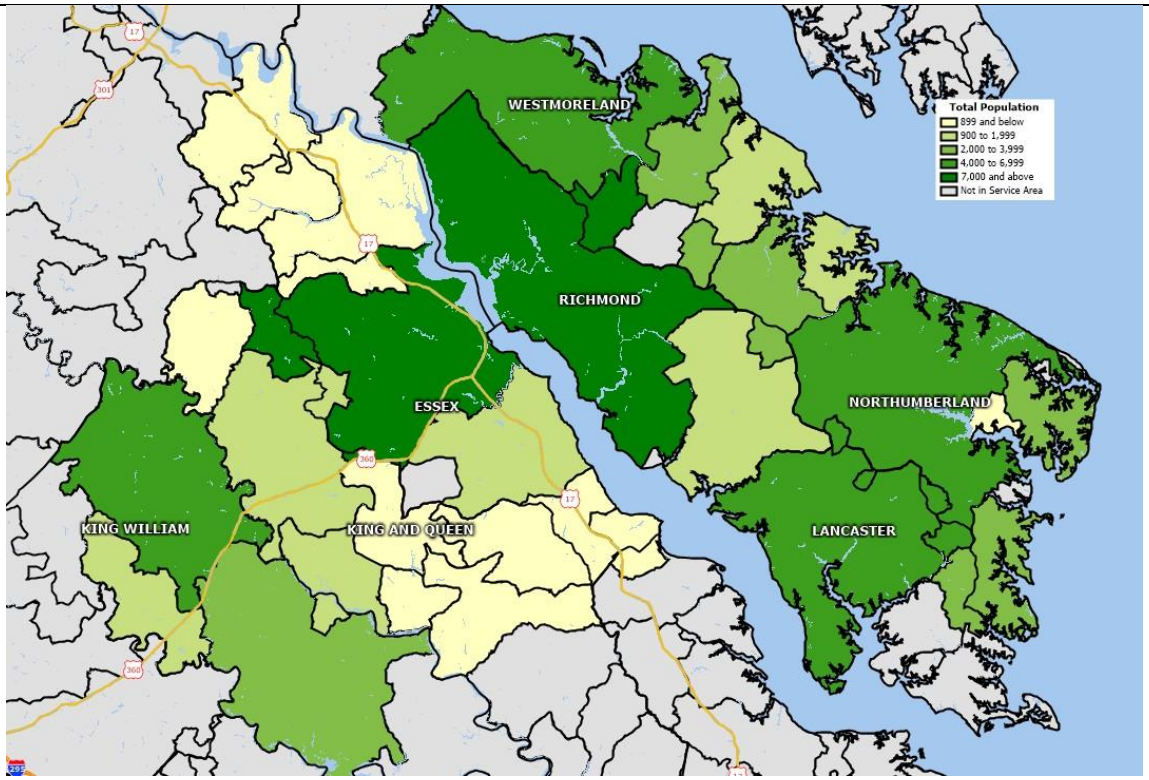
The maps in this section illustrate the geographic distribution of the zip code-level study region population on key demographic and health indicators. The results can also be used alongside the Community Survey Results and the Community Indicators to help inform plans for community health initiatives. The exhibits in this section include the following.

Technical Notes

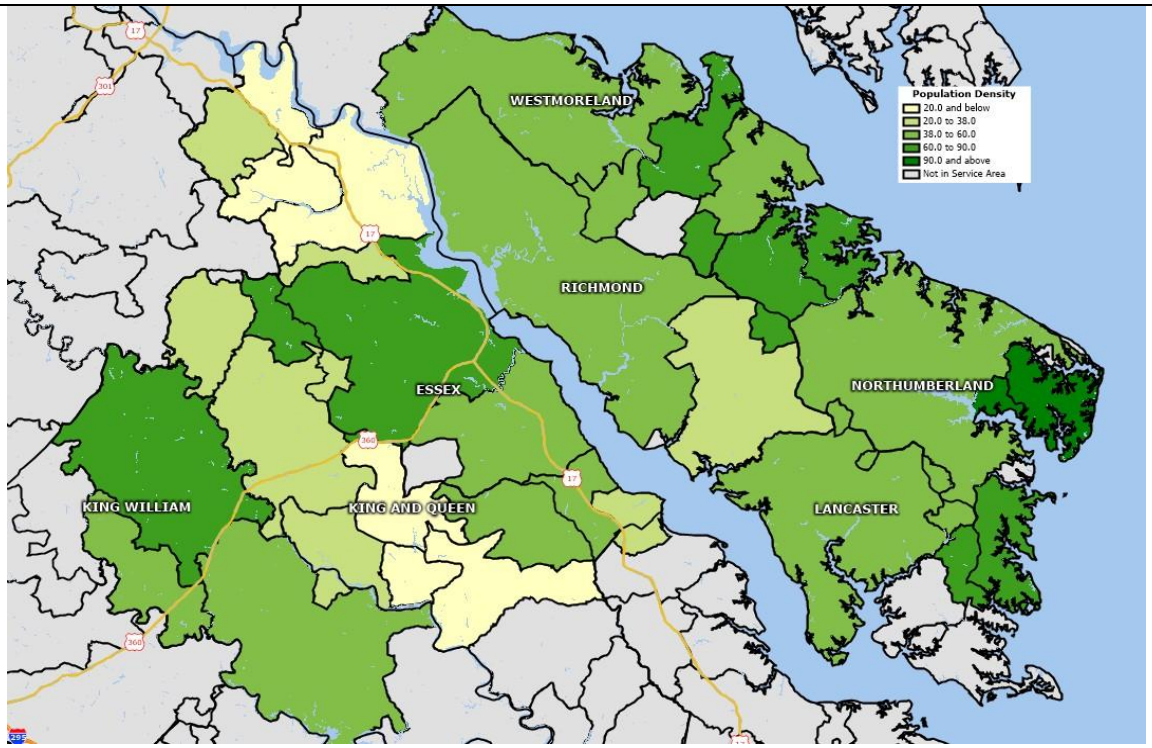
1. The maps and data include 29 zip codes, as identified by Riverside Health System Hospitals, most of which fall within Essex, King and Queen, King William, Lancaster, Northumberland, Richmond and Westmoreland counties. Because zip code boundaries do not automatically align with city/county boundaries, there are some zip codes that extend beyond the county boundaries. Additionally, many residents of the service region use P.O. Boxes which are assigned to zip codes. Some of these zip codes can be mapped, but data are unavailable.
2. A reference map is provided first, to assist the ready in locating the zip codes of interest, as the data maps do not have zip codes labeled for readability.
3. The maps show counts rather than rates. Rates are not mapped at the zip code-level because in some zip codes the population is too small to support rate-based comparisons.
4. Data are presented in natural breaks.
5. Zip Code-Level Study Region zip codes with zero values are noted.

Zip Code Reference Map

Map 1: Total Population, 2014

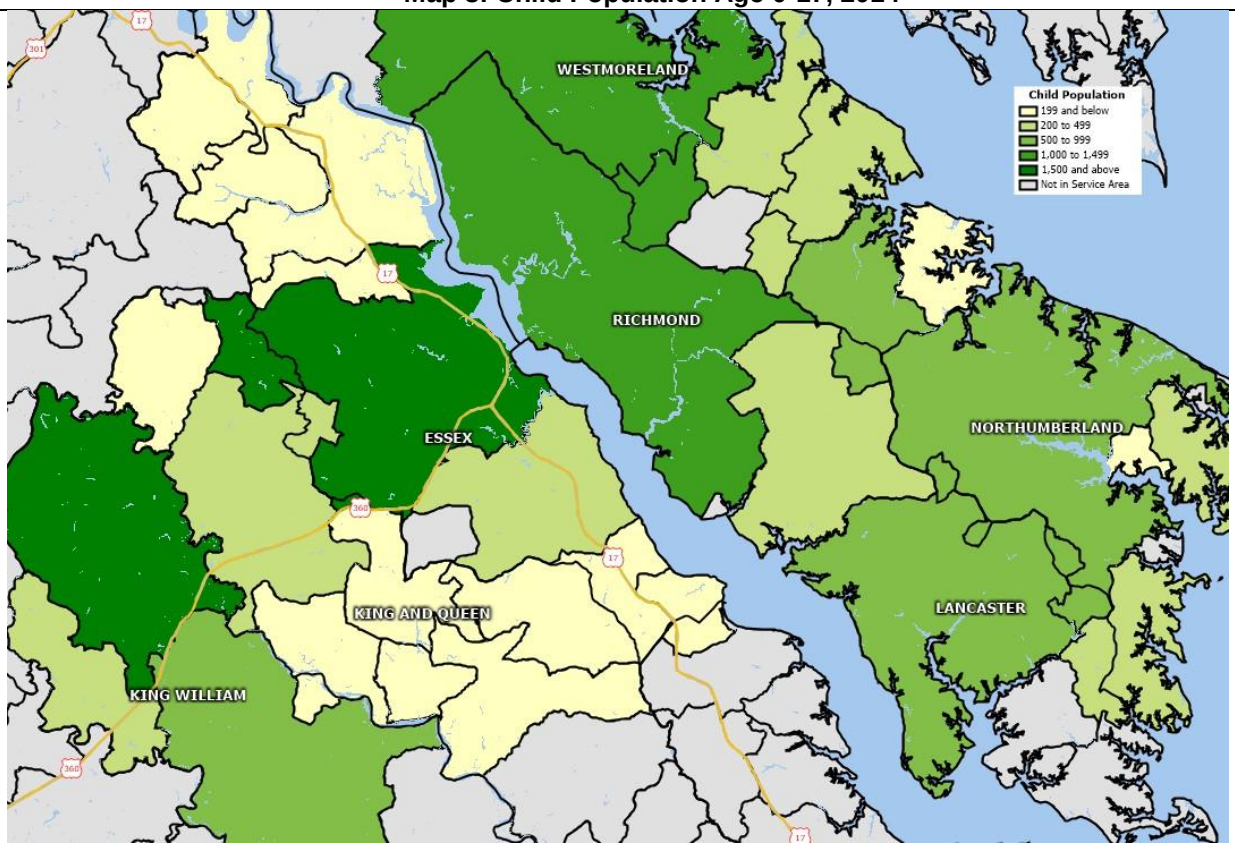


Map 2: Population Density (population per square mile), 2014

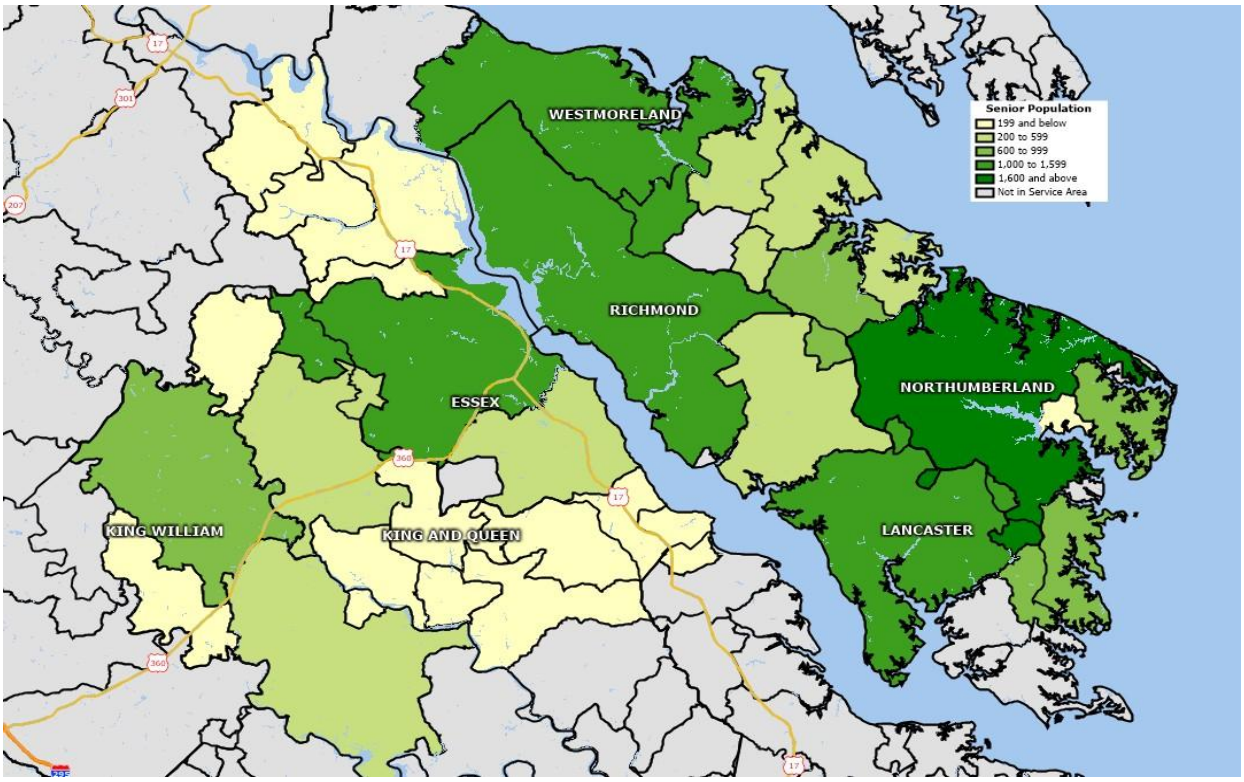


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 3: Child Population Age 0-17, 2014

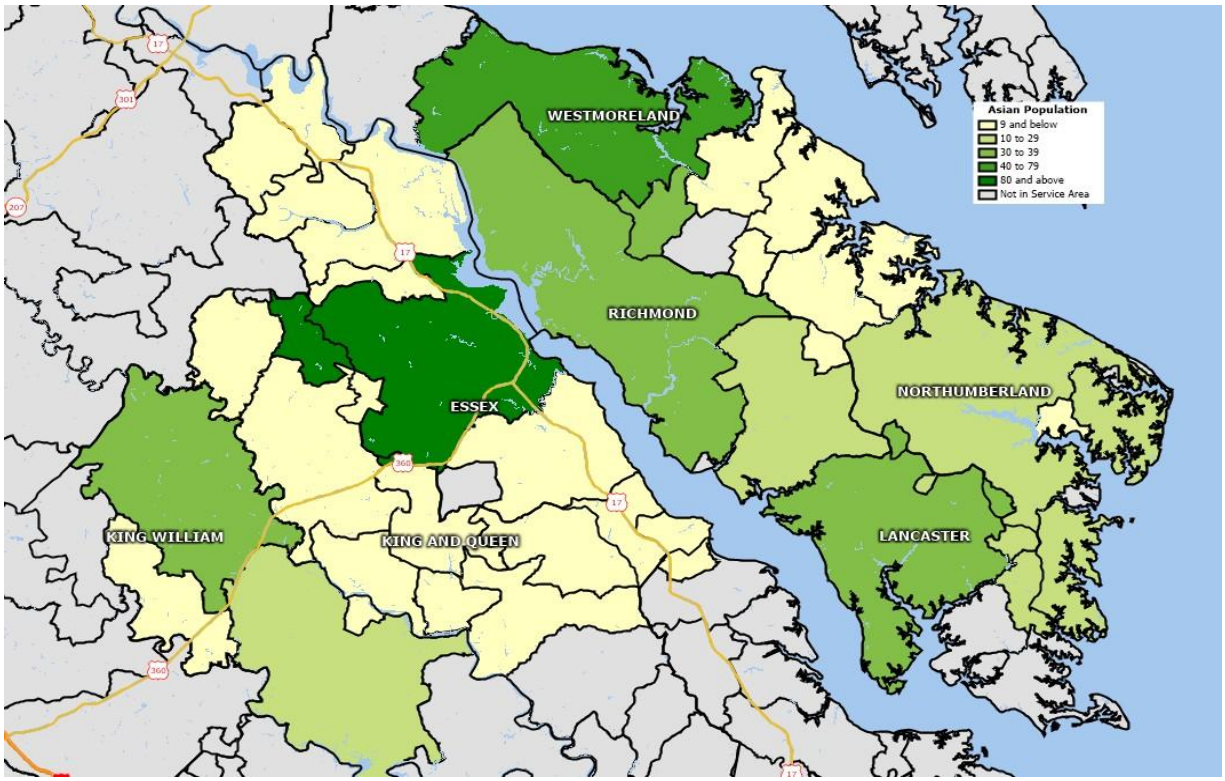


Map 4: Senior Population Age 65+, 2014

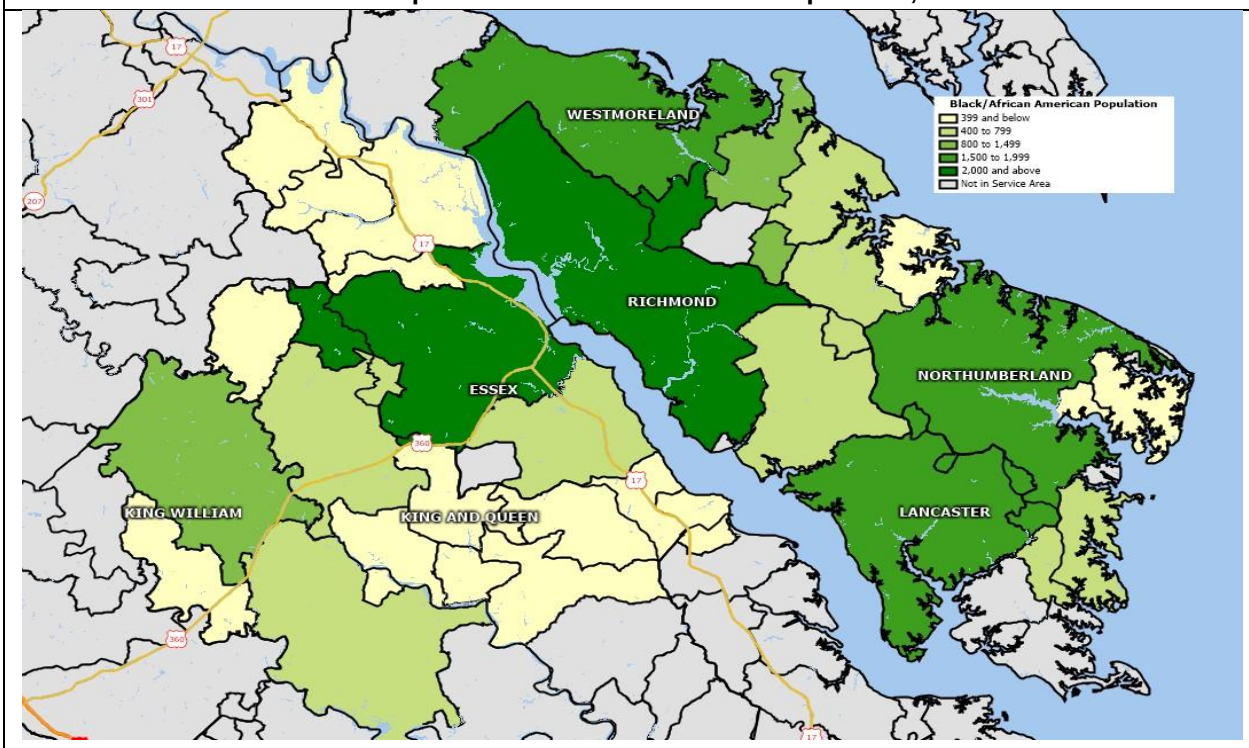


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 5: Asian Population, 2014

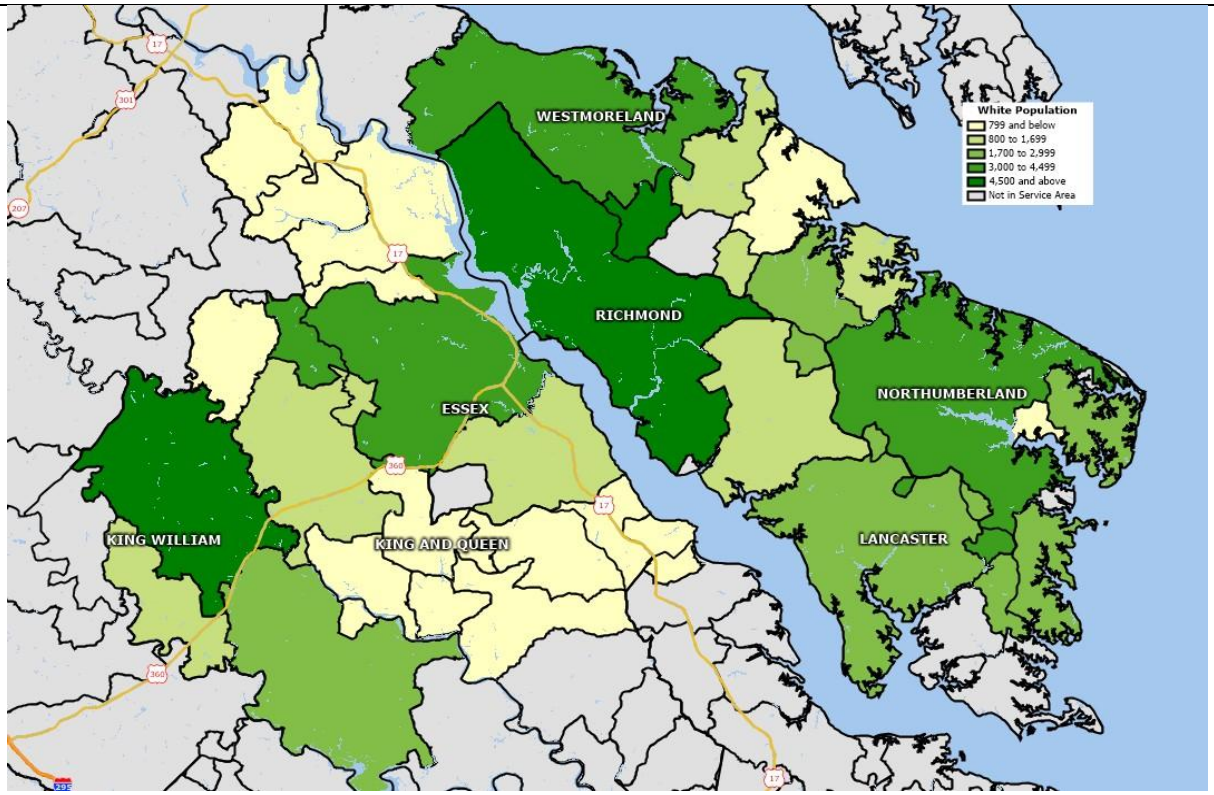


Map 6: Black/African American Population, 2014

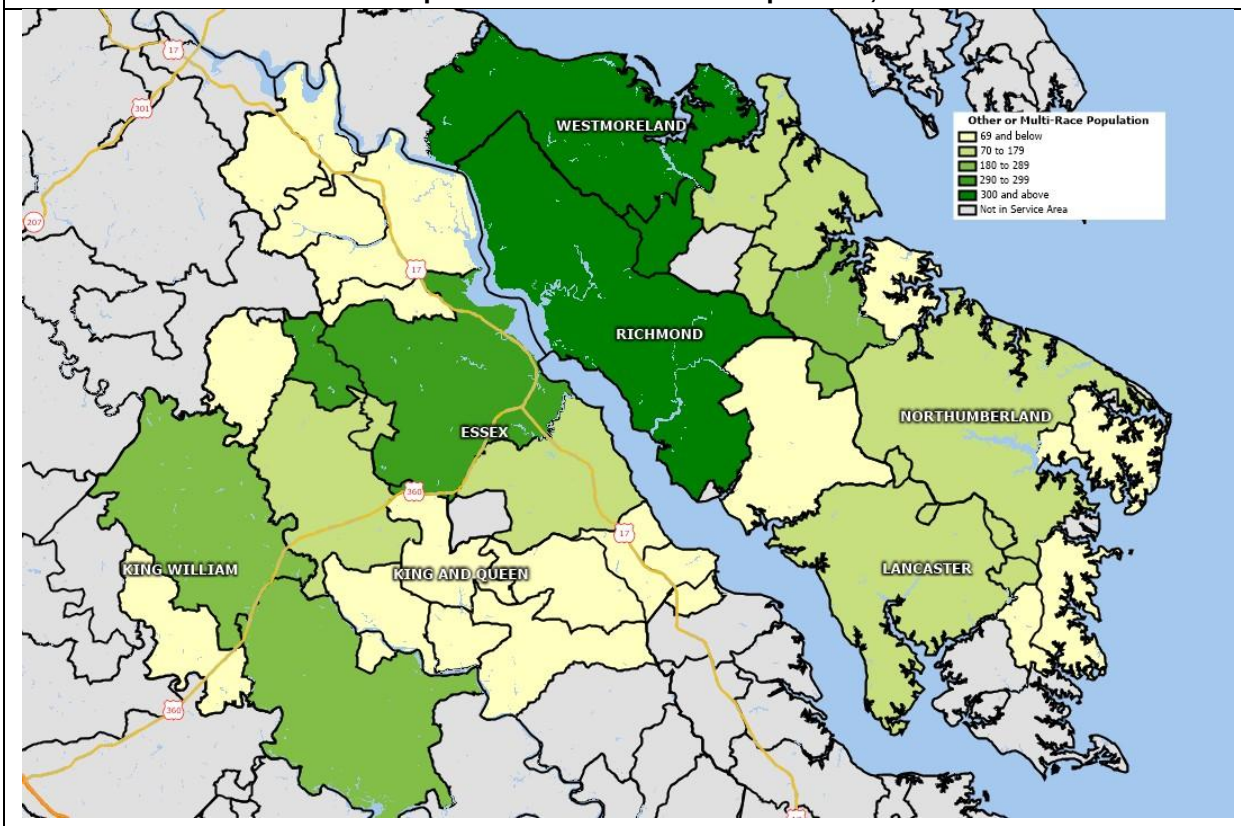


**There were no estimated Asian residents for zip codes 22509, 23805, and 23161.*
Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 7: White Population, 2014

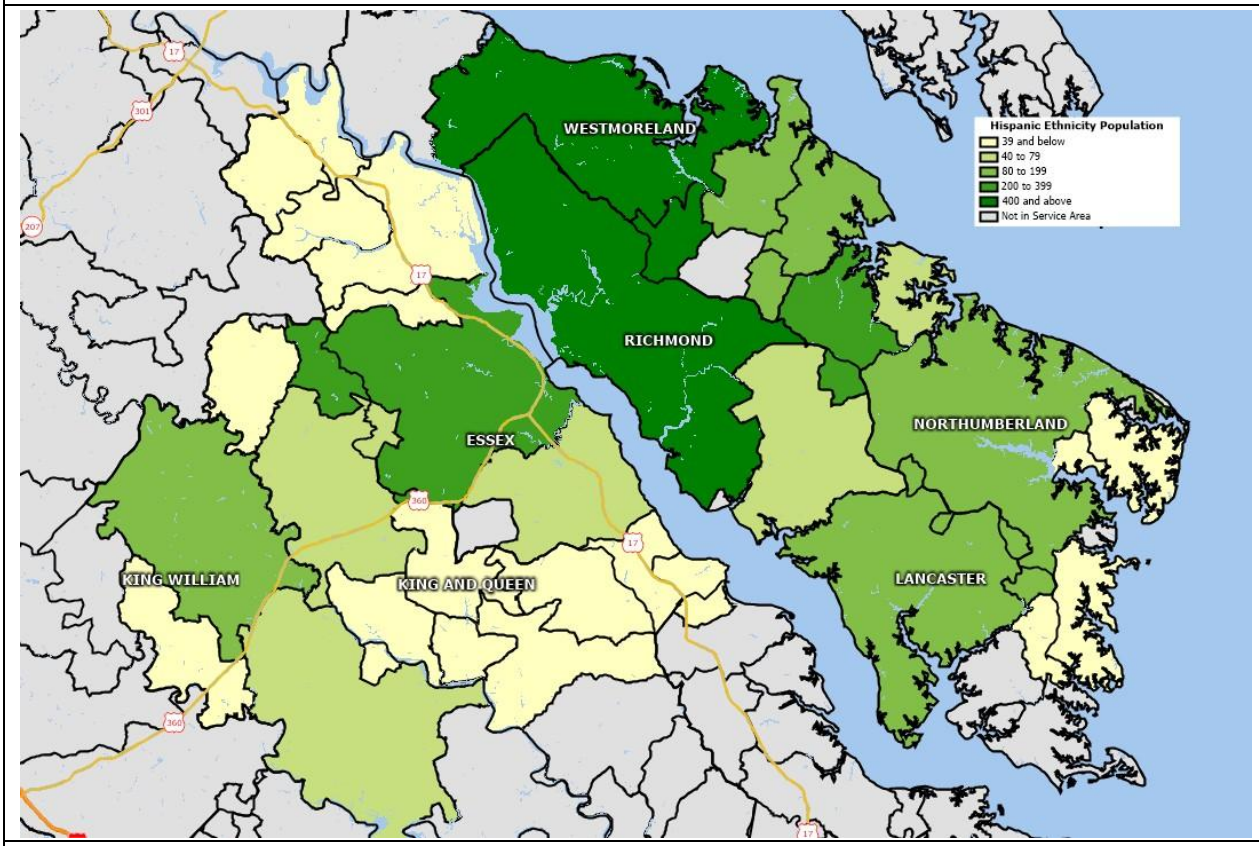


Map 8: Other or Multi-Race Population, 2014

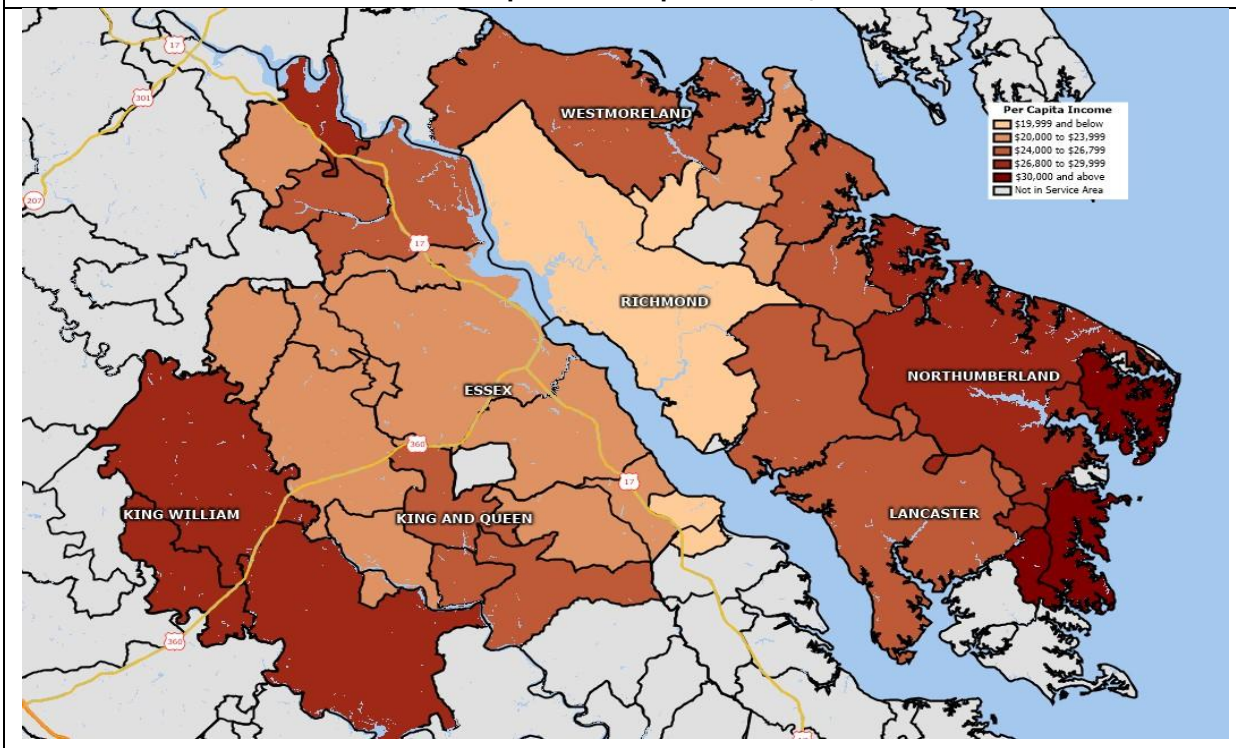


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 9: Hispanic Ethnicity Population, 2014

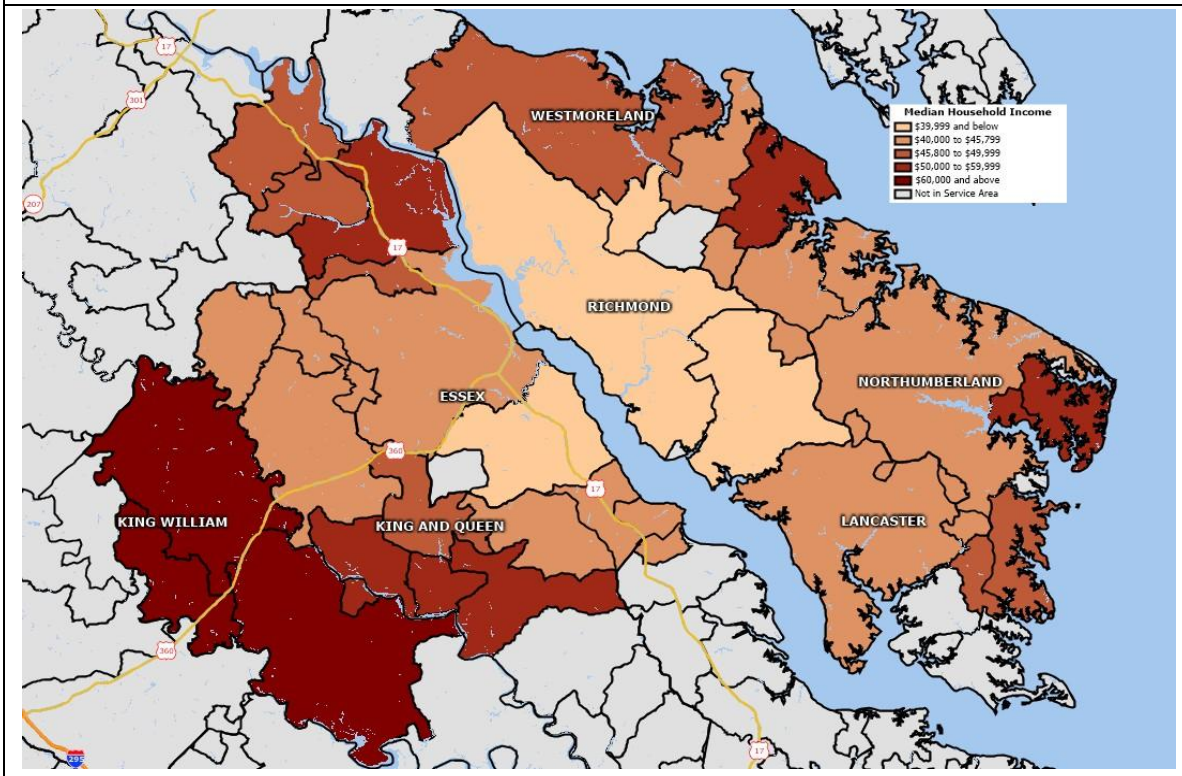


Map 10: Per Capita Income, 2014

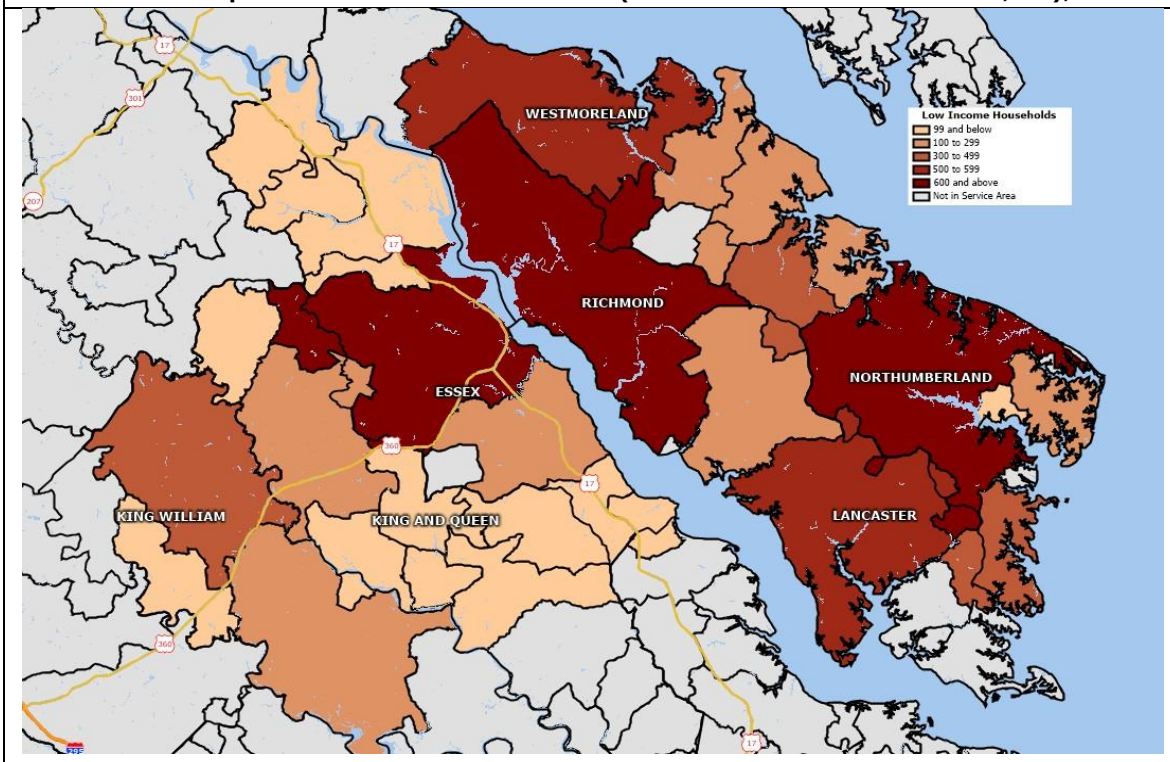


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 11: Median Household Income, 2014

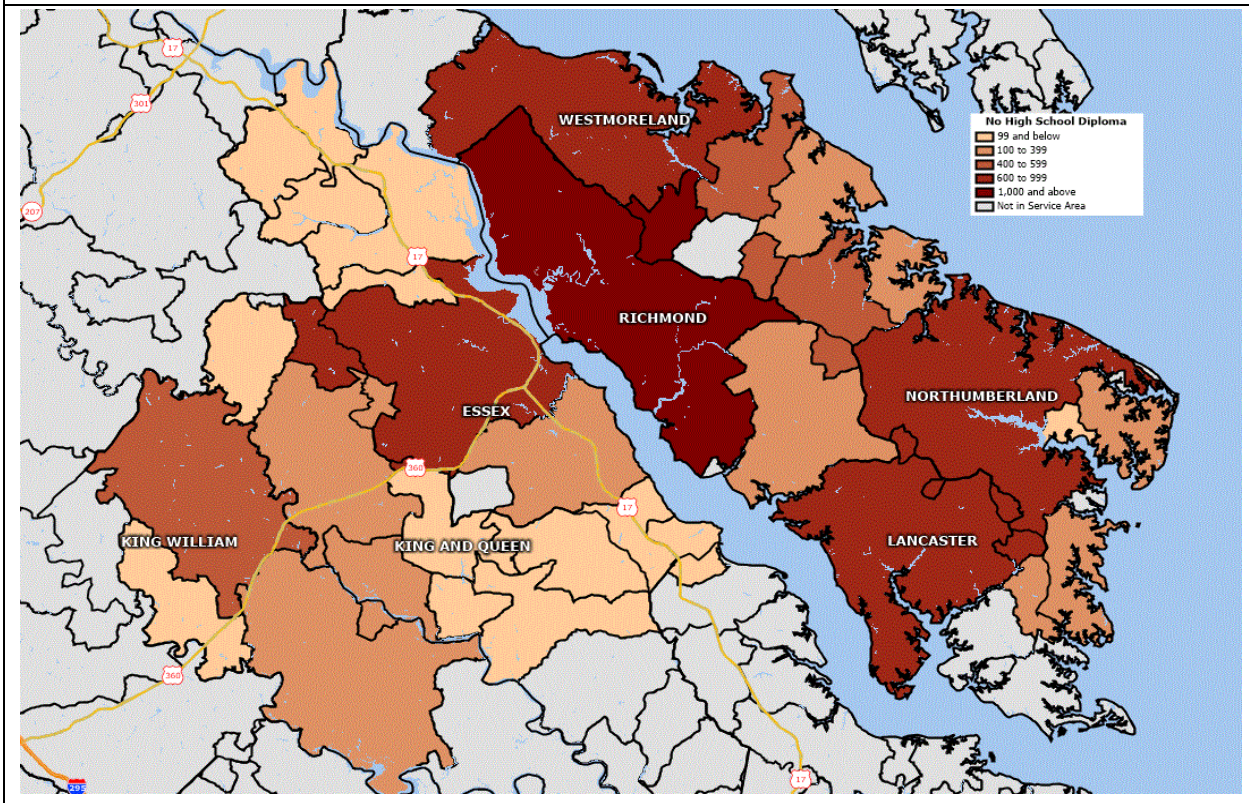


Map 12: Low Income Households (Households with Income<$25,000), 2014

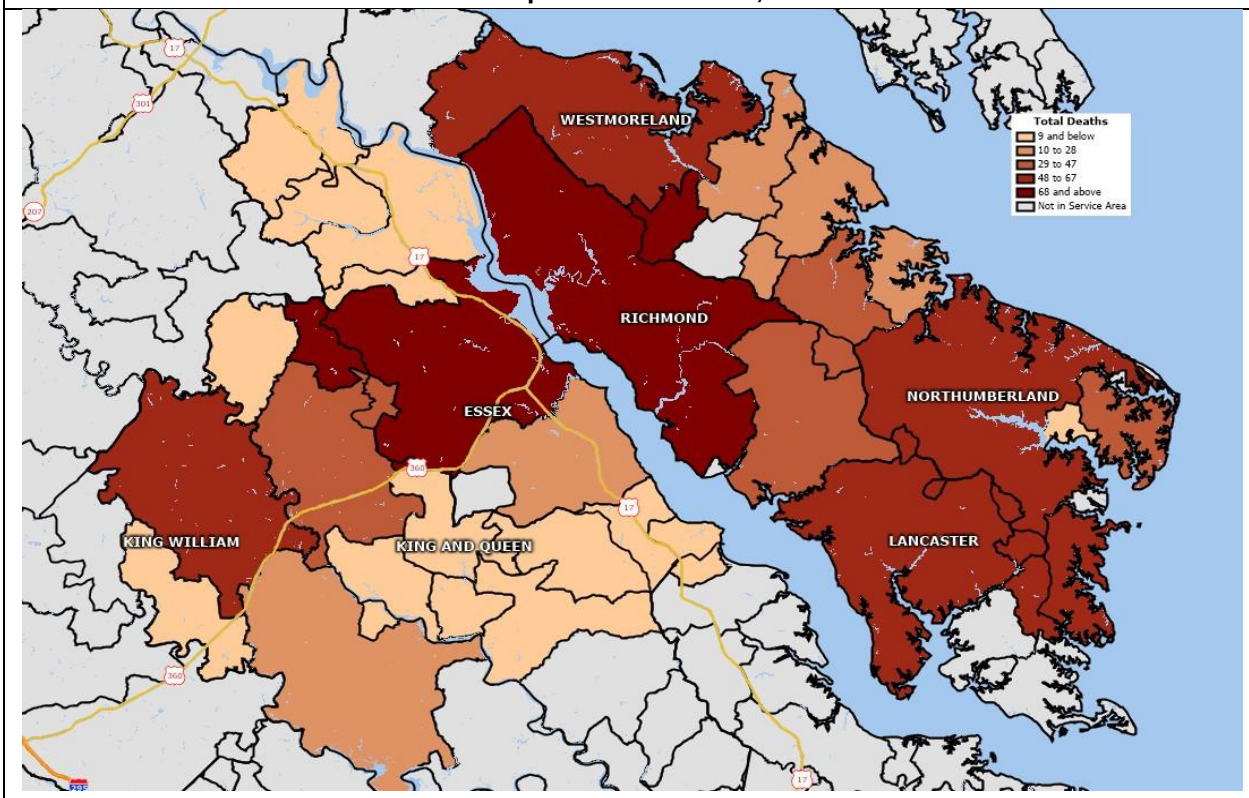


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 13: Population Age 25+ Without a High School Diploma, 2014

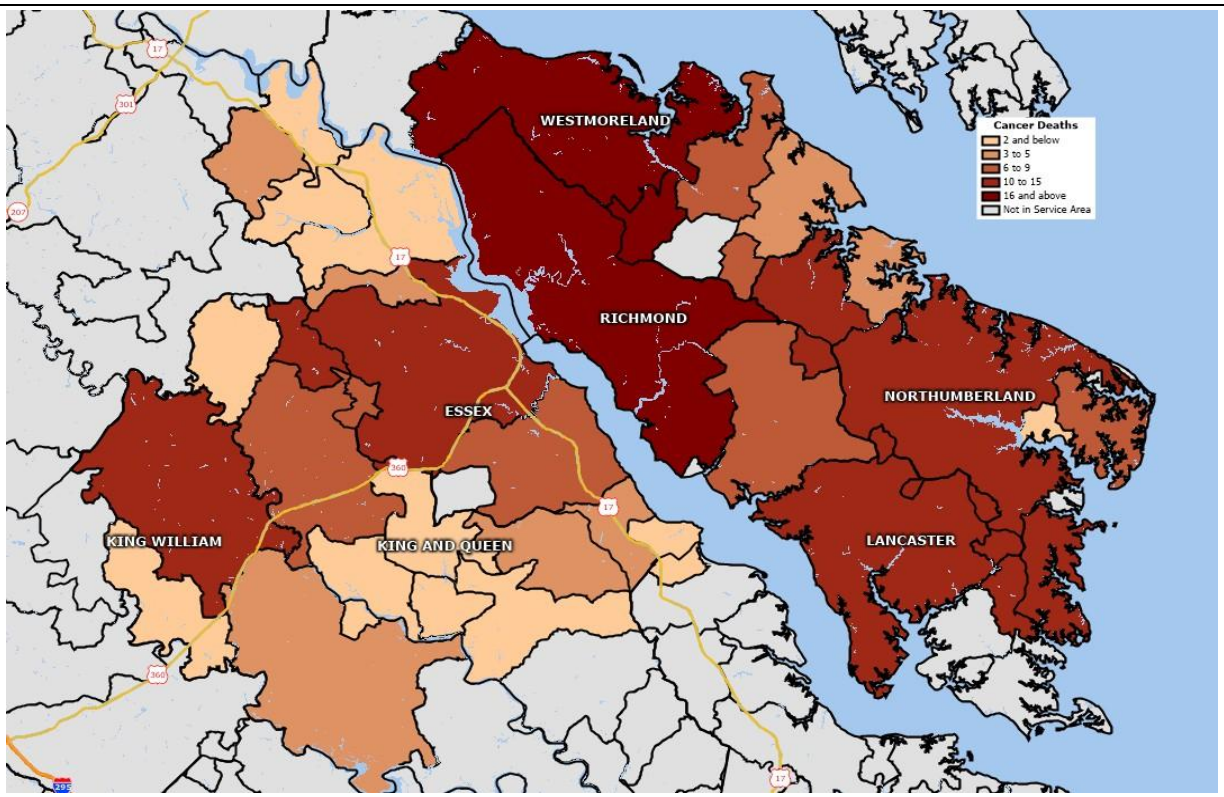


Map 14: Total Deaths, 2013*

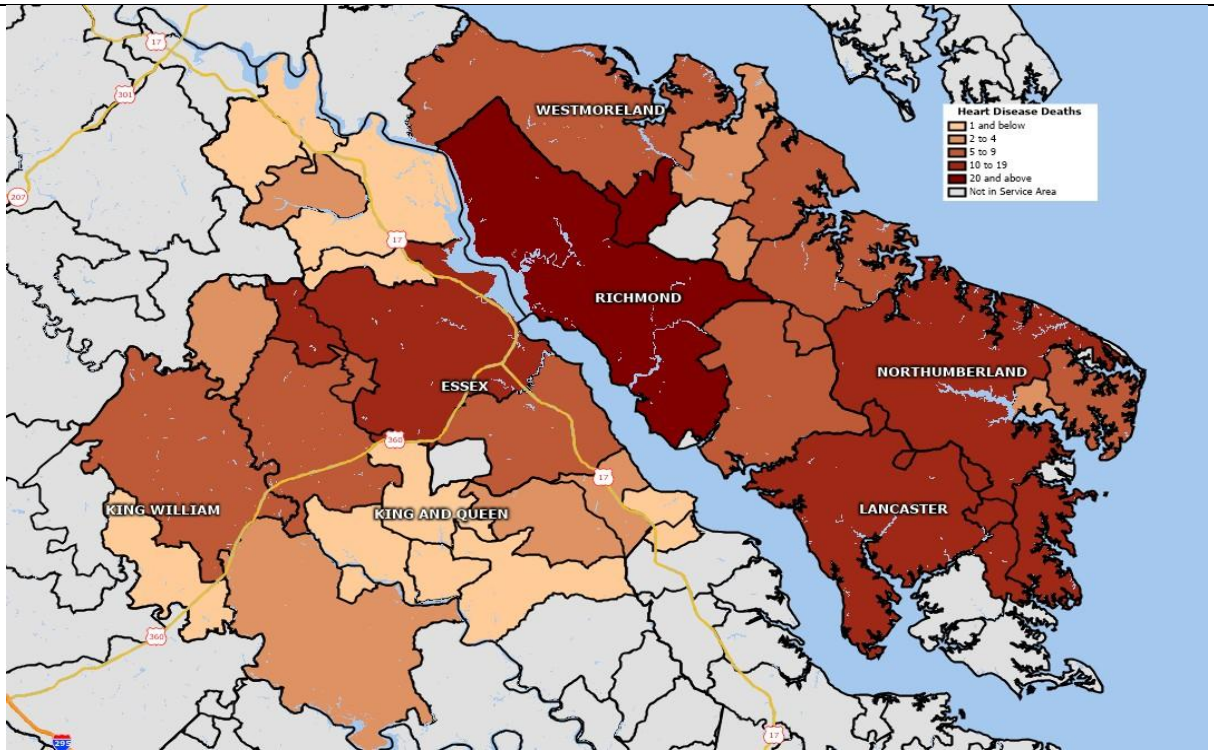


** There were no reported deaths for zip code 22509.*
Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 15: Malignant Neoplasm (Cancer) Deaths, 2013*

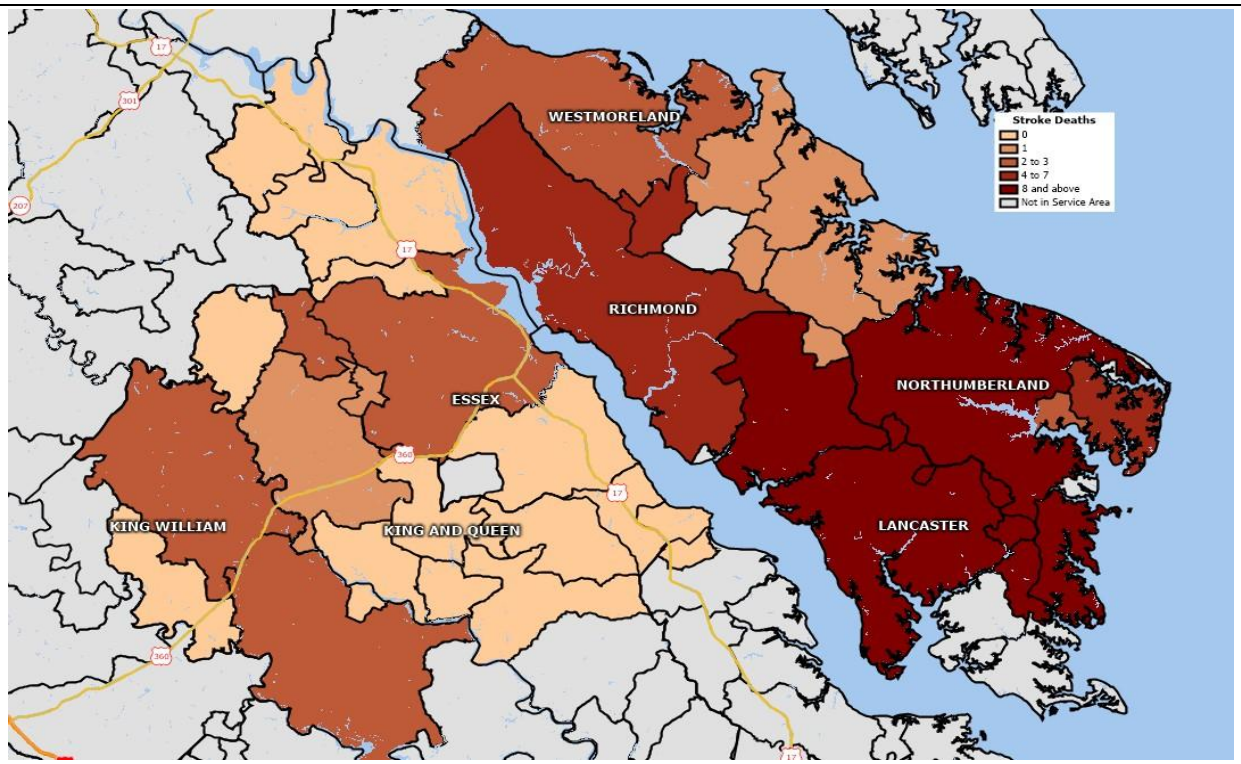


Map 16: Heart Disease Deaths, 2013*

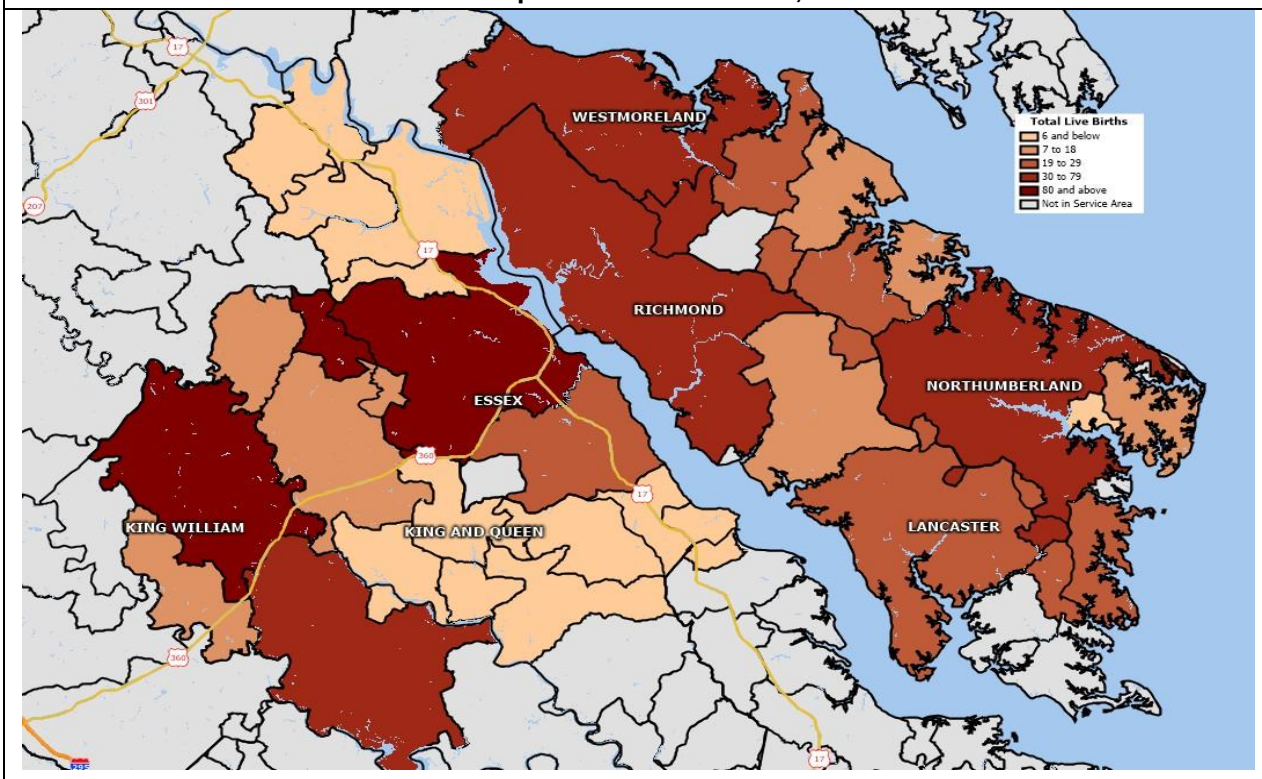


**There were no reported cancer deaths for zip codes 22438, 22476, 22509, 23023, 23085, 23106, 23161, and 23177.*
**There were no reported heart disease deaths for zip codes 22436, 22504, 22509, 23023, 23085, 23106, 23161, and 23177.*
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix C. Data Sources for details.

Map 17: Cerebrovascular Disease (Stroke) Deaths, 2013*



Map 18: Total Live Births, 2013*

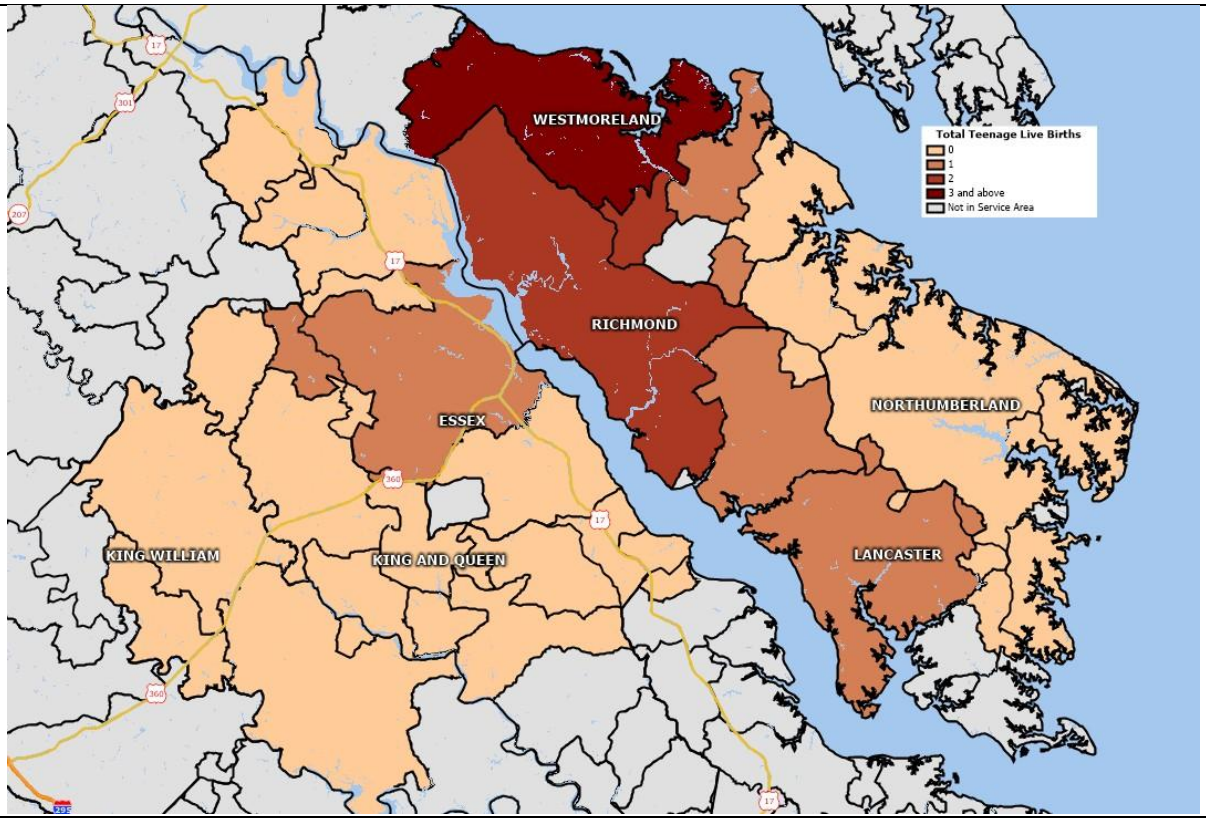


**There were no reported stroke deaths for zip codes 22436, 22437, 22438, 22454, 22476, 22504, 22509, 23023, 23085, 23106, 23126, 23161, and 23177.*

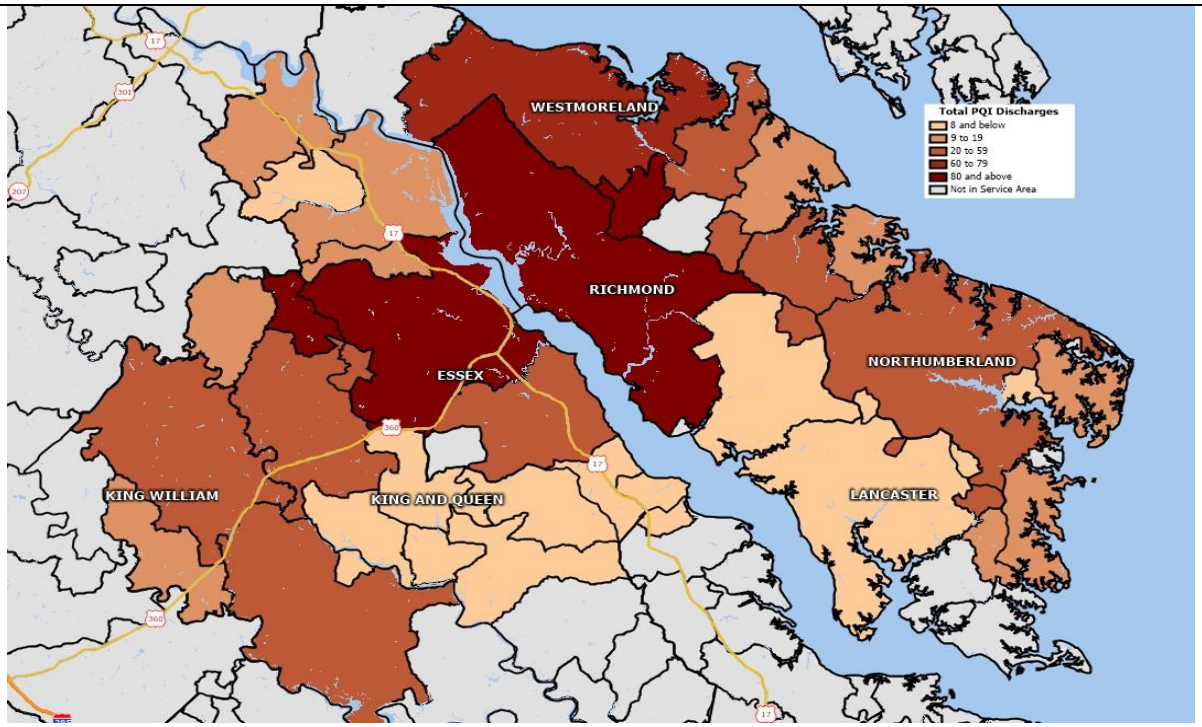
**There were no reported live births for zip code 22504, 22509, and 23161.*

Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix C. Data Sources for details.

Map 19: Total Teenage Live Births (age <18), 2013*

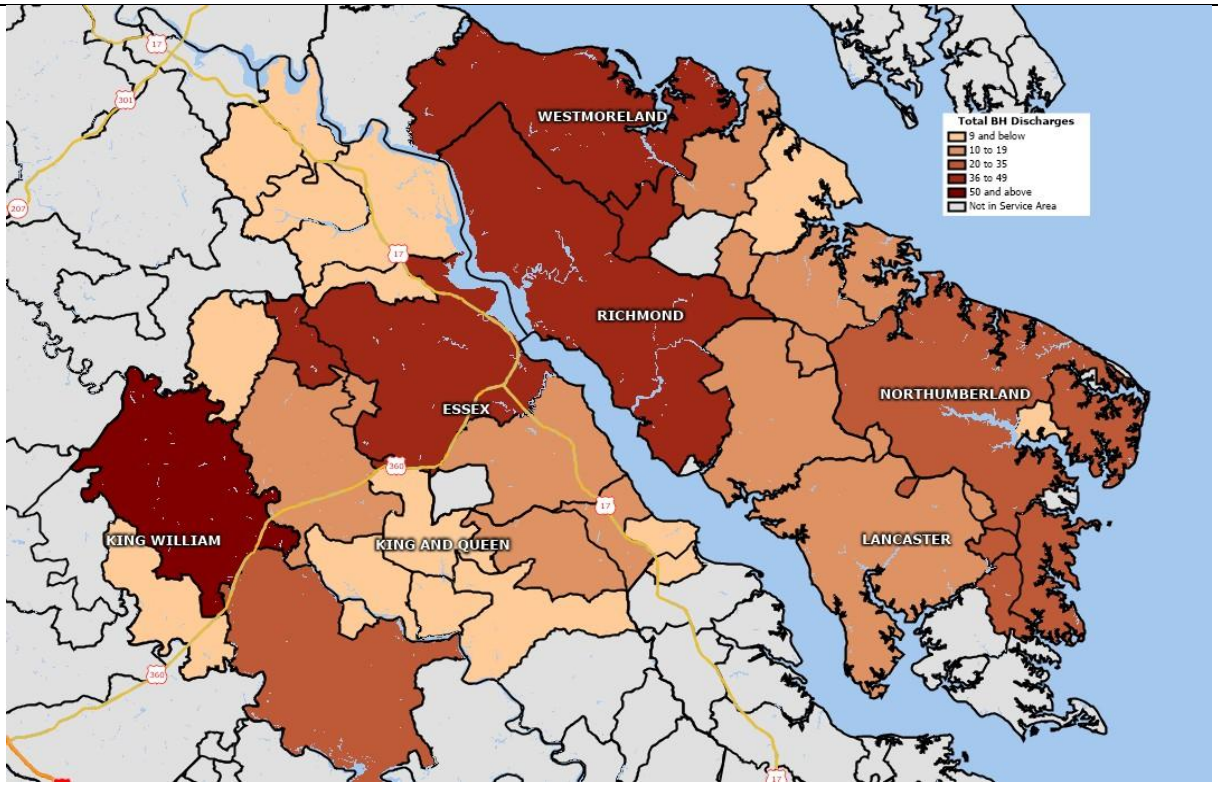


Map 20: Prevention Quality Indicator (PQI) Hospital Discharges, 2013*

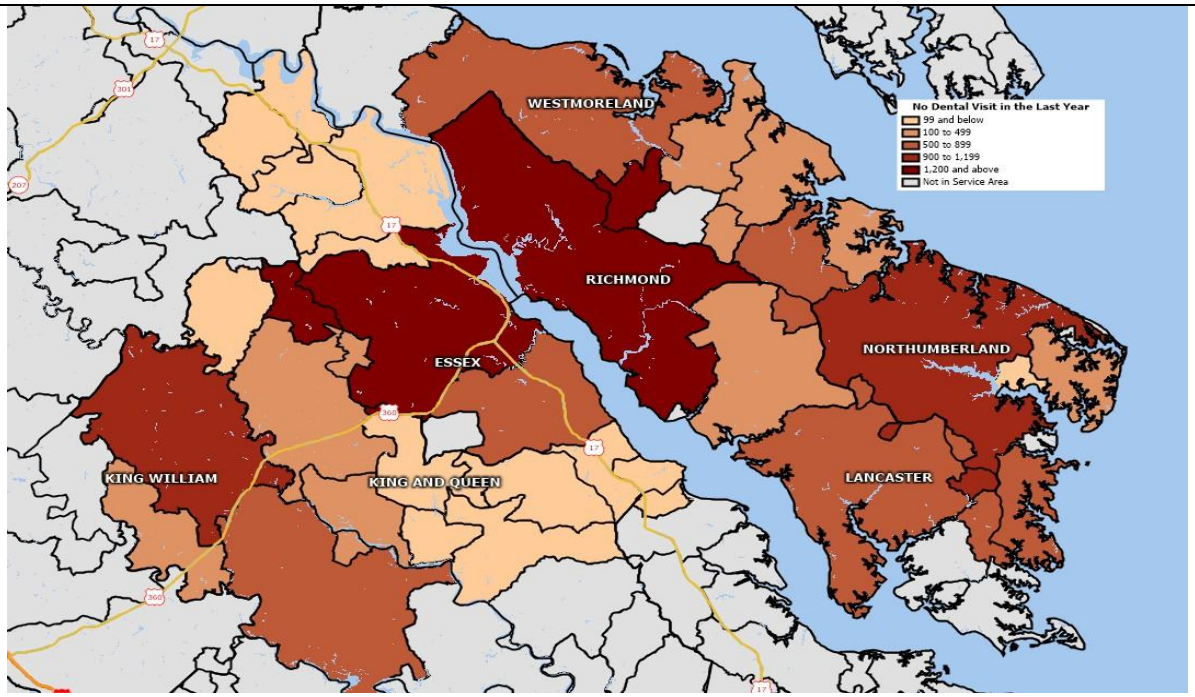


**There were no reported teenage live births (age <18) for zip codes 22432, 22435, 22436, 22437, 22438, 22454, 22473, 22476, 22482, 22488, 22504, 22509, 22511, 22539, 23009, 23023, 23085, 23086, 231006, 23126, 23148, 23161, and 23177.*
**There were no reported Prevention Quality Indicator (PQI) hospital discharges for zip code 23161.*
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix C. Data Sources for details.

Map 21: Behavioral Health Hospital Discharges, 2013*

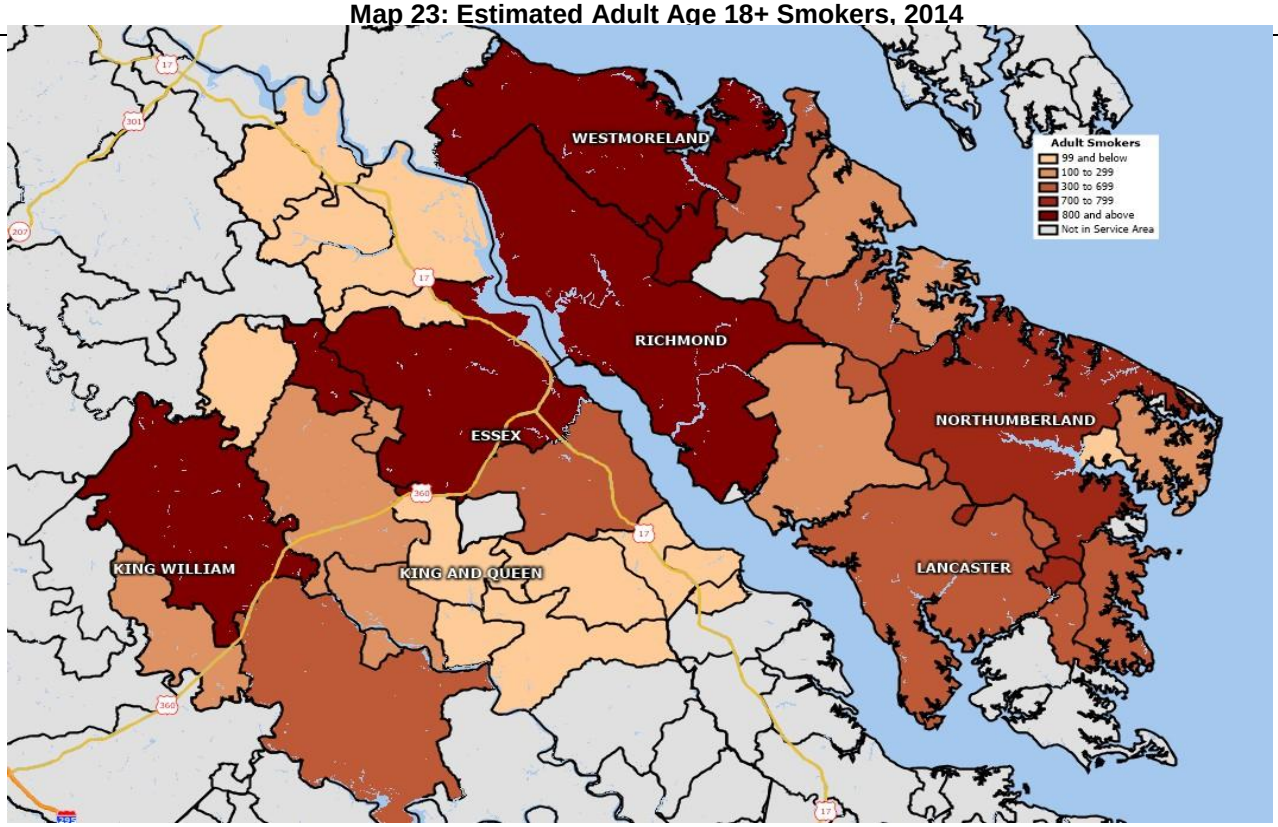


Map 22: Estimated Adults Age 18+ with No Dental Visit in the Last Year, 2014

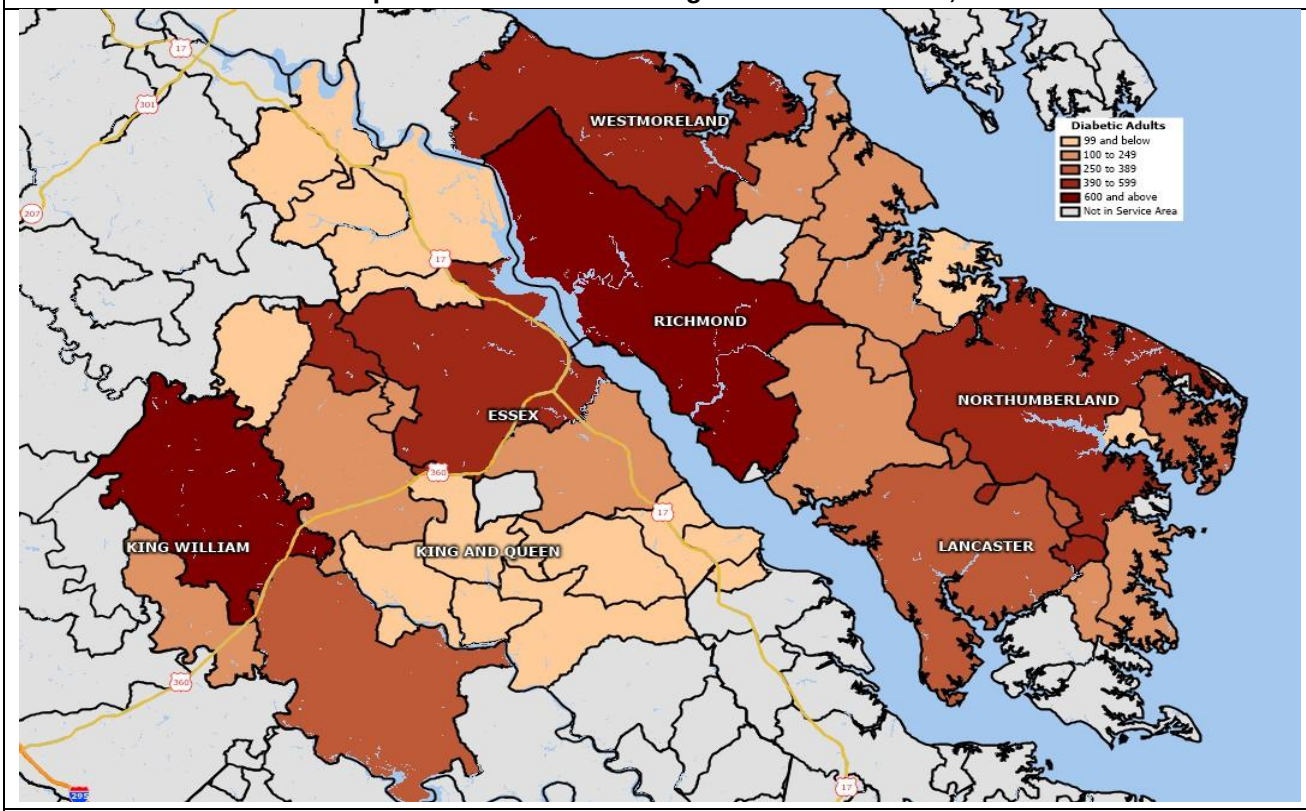


**There were no reported behavioral health discharges for zip codes 22438, 22509, 23085, and 23161.*
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc. Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 23: Estimated Adult Age 18+ Smokers, 2014

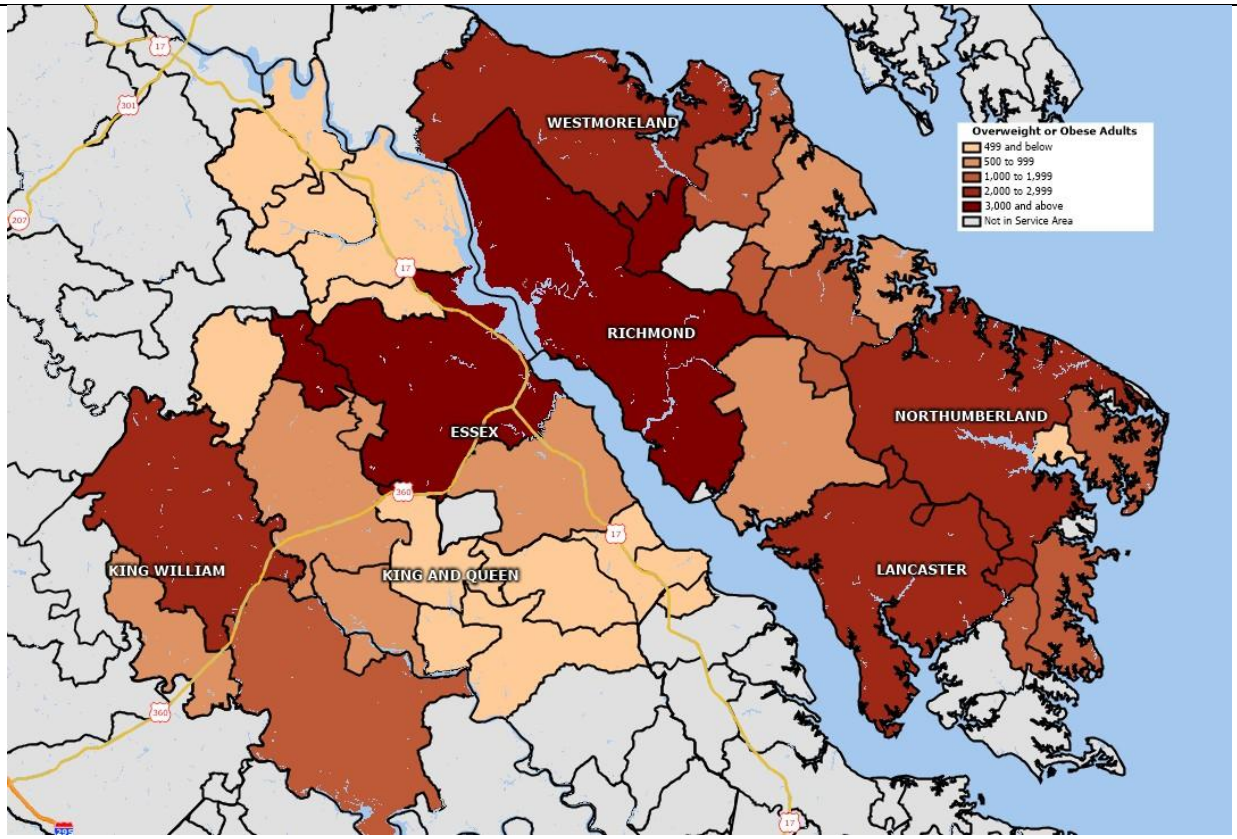


Map 24: Estimated Adults Age 18+ with Diabetes, 2014

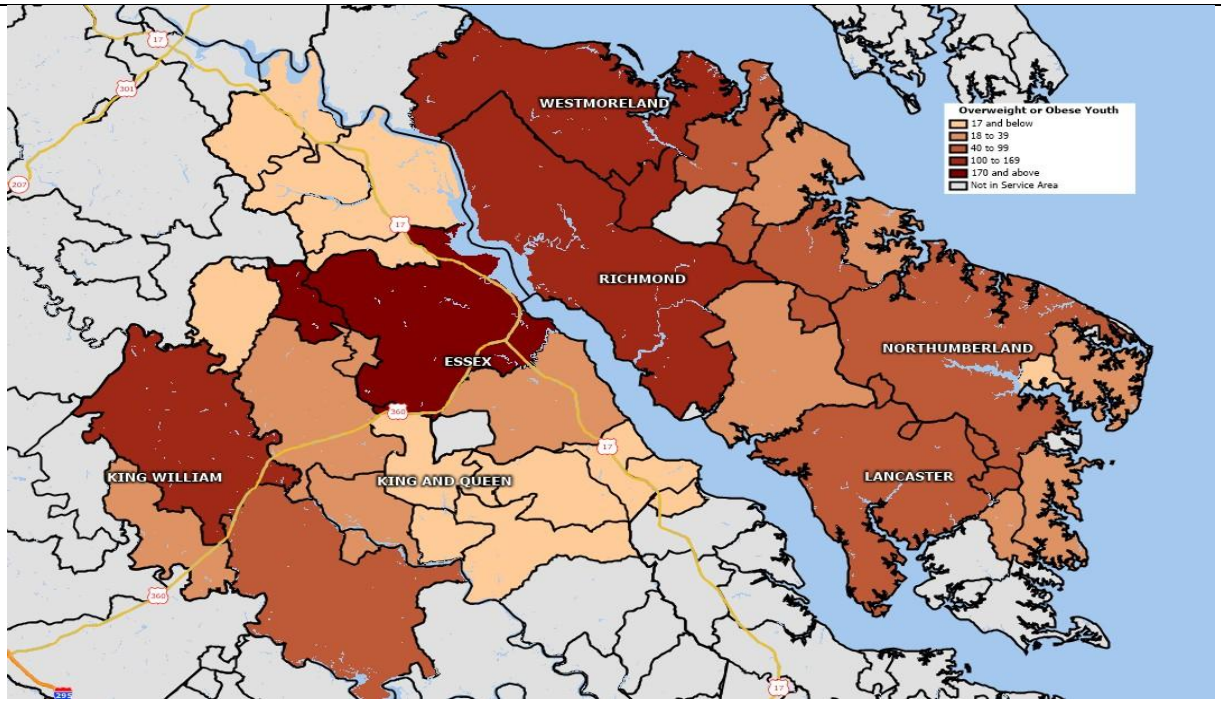


Source: Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 25: Estimated Adults Age 18+ Overweight or Obese, 2014

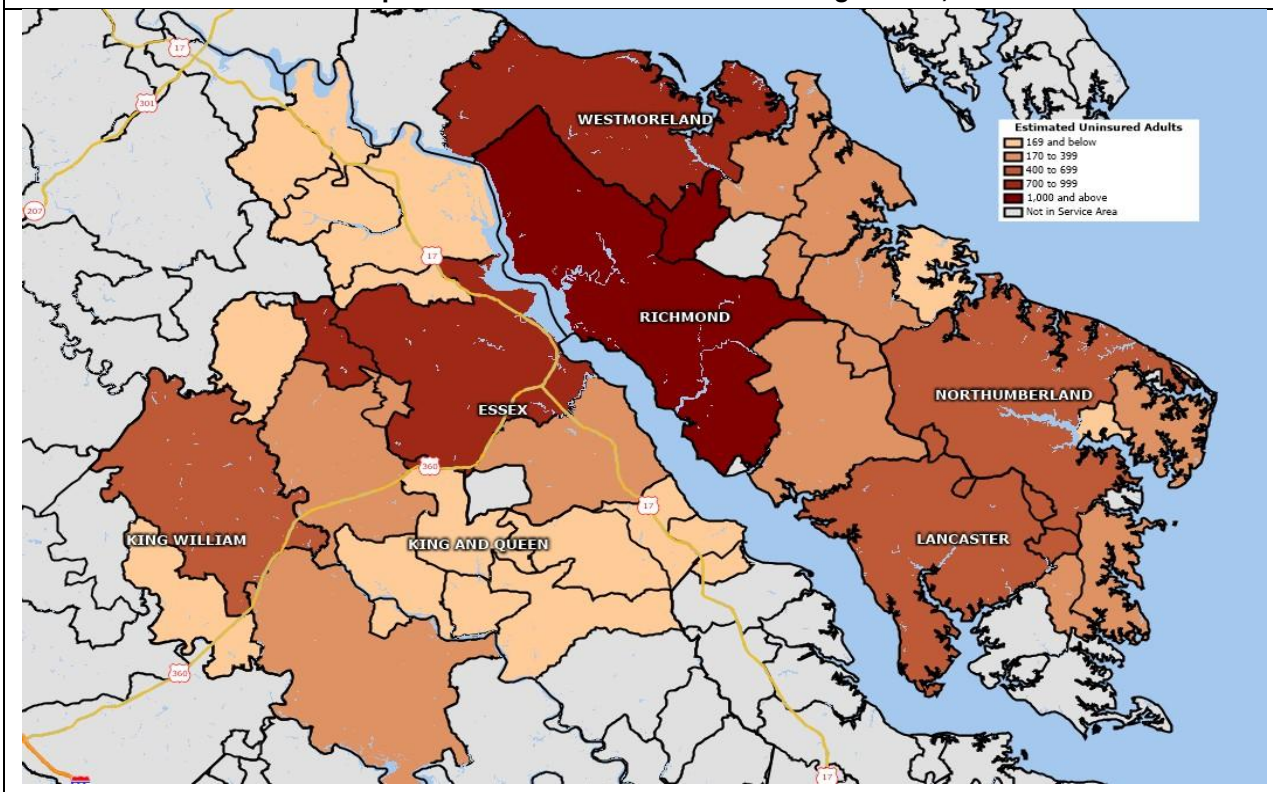


Map 26: Estimated Youth Age 14-19 Overweight or Obese, 2014*

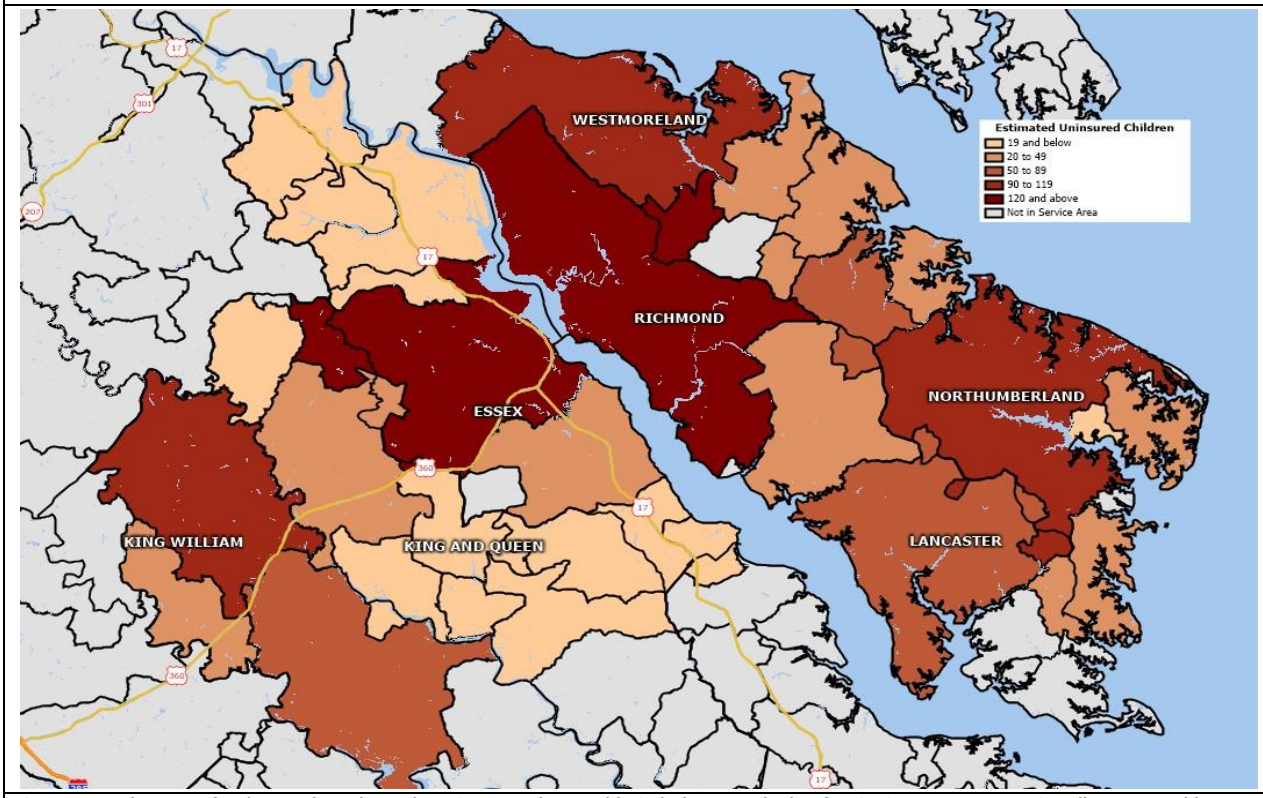


Source: Estimates based on Community Health Solutions analysis of Virginia Youth Risk Behavioral Surveillance System data and estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 27: Estimated Uninsured Adults Age 19-64, 2014



Map 28: Estimated Uninsured Children Age 0-18, 2014*



Source: Estimates of uninsured are based on Community Health Solutions analysis of U.S. Census Bureau Small Area Health Insurance Estimates (2013) and demographic data from Alteryx, Inc. (2014). See Appendix C. Data Sources for details.

Zip Code Map Table

Zip Code	Total Population, 2014	Population Density, 2014	Child Population Age 0-17, 2014	Senior Population Age 65+, 2014	Asian Population, 2014	Black/African American Population, 2014	White Population, 2014	Other or Multi-Race Population, 2014	Hispanic Ethnicity Population, 2014	Per Capita Income, 2014	Median Household Income, 2014	Low Income Households, 2014	Pop. Age 25+ Without a HS Diploma, 2014
22432	396	90.8	59	127	2	99	283	12	8	$27,592	$50,507	38	53
22435	2,721	66.7	589	602	4	643	1,880	194	231	$24,393	$41,575	326	443
22436	459	22.7	92	81	2	238	193	25	16	$22,751	$48,715	39	51
22437	425	47.1	82	97	2	92	309	20	12	$22,384	$42,950	61	71
22438	604	14.6	124	117	2	289	284	28	17	$26,223	$50,772	58	70
22454	1,868	39.4	401	330	5	491	1,282	90	59	$23,035	$39,527	207	187
22460	1,605	33.5	261	354	11	471	1,066	56	48	$25,063	$36,833	251	246
22469	2,332	60.4	446	512	8	1,063	1,146	115	114	$22,116	$42,315	243	404
22473	5,165	47.2	839	1,600	20	1,544	3,478	125	106	$28,024	$44,923	669	649
22476	335	17.4	67	59	2	174	141	18	12	$25,382	$48,715	31	37
22482	2,514	77.5	321	960	15	674	1,795	30	30	$33,994	$45,812	327	240
22488	1,282	48.5	234	290	1	640	557	80	88	$24,049	$52,095	126	188
22503	4,274	49.4	726	1,203	32	1,525	2,644	74	80	$25,925	$42,148	533	699
22504	248	24.9	49	57	1	56	181	10	7	$19,076	$43,023	30	41
22509	44	3.4	8	8	0	22	18	3	1	$29,651	$48,715	5	4
22511	1,212	73.1	195	434	6	264	898	43	46	$28,427	$43,288	155	133
22520	5,505	55.7	1,010	1,302	48	1,734	3,364	362	448	$26,102	$47,738	597	982
22539	2,078	113.5	266	783	19	330	1,704	26	28	$36,055	$53,565	171	176
22560	7,354	63.0	1,636	1,364	83	2,961	4,014	296	252	$22,975	$43,315	744	806
22572	7,414	51.8	1,266	1,311	39	2,384	4,586	407	506	$19,285	$37,793	780	1,310
23009	6,140	76.8	1,537	667	32	892	5,010	208	107	$26,890	$64,880	346	516
23023	274	14.0	55	50	1	86	173	13	8	$24,470	$47,767	30	46
23085	449	7.5	80	93	0	130	300	19	13	$26,069	$50,796	41	76
23086	3,287	38.5	777	425	22	699	2,383	184	61	$27,174	$62,092	217	267
23106	1,242	44.8	287	157	5	253	943	42	20	$28,269	$66,677	79	92
23126	545	27.0	112	94	2	177	334	29	14	$21,671	$45,166	58	89
23148	1,586	30.5	328	269	6	525	973	83	42	$21,464	$43,985	171	246
23161	129	12.9	22	27	0	37	89	5	4	$24,355	$51,434	9	22
23177	957	31.2	179	185	2	296	611	48	24	$23,754	$50,465	78	144

Zip Code Map Table (continued)

Zip Code	Total Deaths, 2013	Malignant Neoplasms Deaths, 2013	Heart Disease Deaths, 2013	Cerebrovascular Disease Deaths, 2013	Total Live Births, 2013	Total Teenage Live Births (age<17), 2013	Total Prevention Quality Indicator Hospitalization Discharges, 2013	Total Behavioral Health Hospitalization Discharges, 2013	Estimated Adults Age 18+ with No Dental Visit in the Last Year, 2014	Estimated Adult Age 18+ Smokers, 2014	Estimated Adults Age 18+ with Diabetes, 2014	Estimated Adults Age 18+ who are Overweight or Obese, 2014	Estimated High School-aged Youth (age 14-19) who are Overweight or Obese, 2014	Estimated Uninsured Adults, Age 19-64, 2014	Estimated Uninsured Children Age 0-18, 2014
22432	5	1	2	2	4	0	4	7	48	56	19	212	6	45	8
22435	31	12	8	1	21	0	24	14	542	390	195	1,430	50	331	74
22436	5	3	0	0	3	0	11	4	21	27	29	245	10	56	7
22437	7	3	2	0	2	0	3	16	39	19	48	214	9	48	6
22438	3	0	1	0	4	0	9	0	29	43	40	308	14	71	9
22454	24	8	7	0	27	0	21	19	518	329	203	969	33	224	29
22460	32	8	7	8	13	1	8	10	243	149	133	893	28	219	30
22469	20	7	2	1	19	1	32	16	334	472	151	1,273	49	309	43
22473	58	13	14	9	44	0	23	32	910	729	392	2,747	87	591	105
22476	7	0	3	0	3	0	3	2	15	20	20	179	7	41	5
22482	58	11	12	8	22	0	15	24	512	392	170	1,477	33	267	41
22488	14	4	7	1	11	0	18	4	160	248	153	648	28	172	22
22503	54	14	14	9	25	1	8	18	526	465	266	2,397	74	466	76
22504	5	1	0	0	0	0	4	2	21	10	27	124	5	28	4
22509	0	0	0	0	0	0	12	0	3	3	3	24	1	5	1
22511	23	4	8	1	7	0	13	13	148	136	88	661	20	126	24
22520	60	17	6	3	58	3	60	36	687	922	522	2,844	111	719	97
22539	40	8	5	4	9	0	11	30	341	269	250	1,203	25	223	34
22560	68	12	13	3	82	1	85	43	1,259	1,019	476	3,760	171	852	121
22572	80	16	23	5	52	2	95	42	1,485	941	784	3,826	123	1,095	134
23009	46	14	6	3	80	0	30	54	1,013	862	642	2,731	136	657	113
23023	2	0	0	0	3	0	4	2	41	34	18	145	6	37	6
23065	2	0	0	0	3	0	6	0	63	65	29	251	9	60	8
23066	25	5	4	2	39	0	23	28	510	428	316	1,529	54	349	57
23106	4	0	0	0	13	0	11	4	161	149	138	560	24	133	21
23126	5	1	2	0	7	0	11	4	89	66	37	283	12	73	12
23148	29	6	9	1	12	0	24	15	270	192	116	816	33	214	35
23161	3	0	0	0	0	0	0	0	17	20	8	73	3	17	2
23177	2	0	0	0	3	0	7	3	147	139	67	524	19	128	19

Appendix B. Detailed Community Survey Responses

Exhibit B1. Vulnerable/At-Risk Populations in the Community	
Are there particular populations within the community who are vulnerable or at risk for health problems or difficulties? obtaining health services?	
1	• Black Community
2	• Colonial Beach section of Westmoreland County
3	• Data shows pockets of higher morbidity/mortality with regard to any particular or multiple health issues. • There are also disenfranchised populations that are uninsured/underinsured and isolated (e.g. homebound, remotely rural) due to lack of transportation or healthcare provider, especially specialty care, or language/cultural barriers
4	• Elderly
5	• Elderly Adults
6	• Elderly population • Pediatric population
7	• Elderly Persons with Mental Health issues • Indigent population
8	• High population in poverty
9	• Homeless
10	• I of course feel that the needs for services for the uninsured and underinsured remain a big concern in our communities. The underinsured are not eligible for certain indigent programs and that leaves patching their healthcare together a challenge. • The other population I have great concerns would be the Medicare population. I just think that has to be a better way to deal with the elderly in our nation
11	• I think there are a substantial number of children and older people in need of services within their communities rather than having to drive to Richmond or Fredericksburg. There is a real student and community education component that needs to be explored to help individuals to make better choices.
12	• Incredibly hard to get psychiatric care for children, also dermatology
13	• Lack of mental health services due to waiting lists • Aging population
14	• Low income seniors
15	• Mental Health continues to be a huge need; [this includes] screening, follow up and continuing care.
16	• Mental health/psychiatric
17	• Mental Illness • Substance abuse treatment
18	• Mentally ill patients • Underinsured
19	• No walk in clinics for minor injuries, colds, flu etc. Physicians won't see you.

Exhibit B1. Vulnerable/At-Risk Populations in the Community	
Are there particular populations within the community who are vulnerable or at risk for health problems or difficulties? obtaining health services?	
20	• Non-English speaking migrant workers • Substance abusers
21	• Obesity
22	• Older adults aging in place without sufficient income or access to services to is a major concern. Seniors frequently do not have transportation to health services and do not have the resources to effectively pursue prevention, such as special dietary needs, prescriptions, etc.
23	• Homeless population • Undocumented migrant population
24	• Self-employed watermen • Farmers
25	• The African American community aged 25+
26	• The elderly who live alone
27	• The elderly. We have a high population of seniors that are living by themselves. Transportation and follow up are sometimes difficult to get done.
28	• The populations at most risk are the impoverished. This affects particularly the old and the young. This is compounded by health literacy concerns.
29	• The poverty level in Essex County is high and as such there are a lot of folks in the community that are at risk because they simply can't afford health care costs.
30	• Uninsured/underinsured. • Seriously mentally ill individuals nationwide die 25 years earlier than the general population. In VA the % is better, but it's still 12 years earlier
31	• The uninsured I feel [are] our most at risk population as they cannot afford health services
32	• Typically, the indigent and elderly
33	• Low income families • Migrant workers without access to adequate healthcare.
34	• Young children • Seniors
35	• Youth - there are not enough medical providers in this region for children

Exhibit B2. Vulnerable/At-Risk Regions in the Community	
Are there particular neighborhoods or geographic regions within the community where the resident population may vulnerable or at risk for health problems or difficulties obtaining health services?	
1	• All
2	• All geographic regions
3	• Colonial Beach Section of Westmoreland County
4	• Except for west point ems service is very spotty-great distance between stations and few volunteers equals long response time and sometimes no response
5	• I believe our entire community is impacted to some degree. Some more than others.
6	• The immigrant population relies on a handful of people to get the services they need.
7	• In a rural area, there are many pockets of the vulnerable /at risk health populations
8	• Colonial Beach • Stratford Harbour • Glebe Harbor/Cabin Point • Coles Point • Kinsale and Sandy Point have a large retiree population, but there is also an adequate number of school-aged children (students) that ask reside in these communities.
9	• These populations are intermingled throughout the community.
10	• Northumberland has a high percentage of aging adults who are often isolated from their families.
11	• Publicly supported housing developments • Group homes
12	• Risk for mortality/morbidity can be predicted by sub-geographical measures such as zip code or census tract.
13	• The entire Northern Neck region
14	• The entire Northern Neck/Middle Peninsula region - most specialists are in Richmond or Williamsburg. Those without transportation cannot get the care they need
15	• The region's most at risk are those in the more rural outlying communities.
16	• Trailer park across the fire department training in Tappahannock
17	• Undocumented, non-English speaking families residing both in the Middle Peninsula and Northern Neck regions are vulnerable as a result of fear, and not knowing how to navigate support and services.
18	• Transportation is a major issue.

Exhibit B3. Health Assets in the Community	
Think of health assets as people, institutions, programs, built resources (e.g. walking trails), or natural resources (e.g. beaches) that promote a culture of health. In your view, what are the most important health assets within the community?	
1	• The area health centers/clinics are wonderful resource for our area. • Natural resources would be the rivers that boarder the surround counties
2	• Local fitness centers are the only assets I can think of.
3	• Bike path • Beach • New gym
4	• Bike trail
5	• Close proximity to state parks and the river • Local YMCAs offer services
6	• CSB when not utilizing a waiting list • Lots of waterfront properties for scenic exercise • YMCA
7	• Fitness center • Community run/walks
8	• Fitness Center • Wild Life Refuge (walking trail) • Riverside Health System Hospitals • Ledwith - Lewis Free Clinic (healthy eating/living programs / 5K run / walk, smoking cessation).
9	• Fitness center • Golf courses • Nice walking tracks at the high schools
10	• Fitness Centers
11	• Hospital • Doctor's office • YMCA • Churches
12	• Hospital Health systems • Free clinic • Fitness center
13	• Westmoreland State Park • George Washington's Birthplace • YMCA • Coles Point Marina • Glebe Harbour/Cabin Point/Stratford Harbour Pools and Clubhouses • Biking/walking trails throughout Westmoreland County
14	• Job training, emphasize that education is the future for success
15	• Many communities have a long history of resiliency and support for each other.

Exhibit B3. Health Assets in the Community	
Think of health assets as people, institutions, programs, built resources (e.g. walking trails), or natural resources (e.g. beaches) that promote a culture of health. In your view, what are the most important health assets within the community?	
16	• Open space for walking
17	• Prevention services and initiatives that serve to promote wellness and provide education regarding healthy living to the community residents.
18	• Preventive medicine
19	• Primary care offices • Free clinics • Hospitals
20	• Riverside Health system
21	• Riverside Hospital • Tappahannock Free Clinic
22	• Riverside Health System Hospitals • Tappahannock Free Clinic
23	• Riverside • Local Churches • Rivers
24	• The few doctor's offices we have
25	• The fitness facilities the YMCA's and body fitness.
26	• Hospital • Various clinics/offices • YMCA, and Wellness centers, but could be schools (if the right programmatic support was in place)
27	• The natural resources of a rural environment, • The caring people who work in local health services and Riverside health care settings
28	• The practices • Schools • Hospital
29	• The Rappahannock River
30	• The willingness to learn
31	• Water purification
32	• Water
33	• We are fortunately to have several general practices and specialist in the area.
34	• YMCA
35	• YMCA provides good community outreach for health

Exhibit B4. Health Assets Needed in the Community	
Are there any health assets that the community needs, but may be lacking?	
1	• Affordable fitness centers • Public Beach • Walking/biking trails • Work place exercise opportunities
2	• Although we are a river community, there is no direct access to enjoy the benefits of the water or a park that facilitates or promotes wellness opportunities free of charge. • There are no bike trails or designated lanes for bike travel.
3	• Assess to great facilities for immediate care
4	• Basic health coverage
5	• Beaches • Walking trails • Bicycle trails
6	• Community Based Mental Health Services • Autism Private Day/Therapeutic Placement
7	• Dental services
8	• Gym
9	• Health in policy in community planning is lacking. • Public access to natural resources is lacking. • Prenatal care is largely non-existent. • There is a lack of data to determine persons delivering long term care without resources. • Access to specialty care is a problem in many areas. • There is a continuing decline in public health resources. • There is a lack of adequate support services especially at-home services.
10	• Mental Health Services • Lack of available SNF and ECF beds
11	• More after school/preschool activities for exercise and dietary counseling and implementation
12	• More family doctors
13	• More health services for those on Medicaid.
14	• More physicians • Access to immediate mental health services
15	• More public space for healthy activities
16	• Need more dietician or nutritionists to promote healthy eating
17	• Need more specialty care.
18	• Needs to be more of a buy in from community leaders to embrace and educate about healthy lifestyles and choices.

Exhibit B4. Health Assets Needed in the Community	
Are there any health assets that the community needs, but may be lacking?	
	• More opportunities need to be available where individuals can exercise and enjoy the outdoors. • Access to preventive health needs to be expanded.
19	• No walk in clinics • Inadequate EMS transport
20	• Nutritionist • Counselors • Primary care providers
21	• Outdoor fitness areas (e.g. walking trails, parks, etc.) • Chronic care services for low income residents • Substance abuse outreach programs
22	• Recreation Center • Fitness Center other than YMCA • Larger Park
23	• Senior citizen center
24	• Specialty care clinic
25	• Parent academy (classes for parents to obtain life skills, career resources and preparation, and help to assist parents with helping their children with homework) • A year-round pool and indoor/outdoor walking track • An exercise/health facility for the entire community. The pools in specific communities are only available to residents in the community. There are also many residents that live outside the parameters of these communities.
26	• There are opportunities for improvement at all levels
27	• Track
28	• Walking trails would be nice
29	• Walking/bike trails • Water access
30	• Walking/biking trails • Parks
31	• Weneed more specialty services- Est Mental Health/Psychiatry resources.
32	• YMCA
33	• YMCA- type organization in Essex county

Exhibit B5. Additional Ideas and Suggestions	
Optional: Please use the space below to share any additional ideas or suggestions for improving community health.	
1	• Health fairs aimed at prevention. For people who can't afford health care costs they have to be educated on prevention.
2	• I strongly feel that it is essential that healthy options are available at multiple levels. Our community (region) would be best served if stake holders, from across all sectors would come together and embrace a culture of change around creating and implementing healthy choice options. It serves no purpose to generate ideas and offer education if the region does not support and advocate for change. The buy in for change must start with families, church communities, local businesses, civic organizations, healthcare organizations, and local government to advocate and create opportunities. And, from an economic development perspective, it behooves the town/county to build an environment that provides healthy outdoor/indoor fitness options. • Also, we must increase access to mental health programs.
3	• In Westmoreland, we are in the process of planning for a new high school complex. It would be beneficial to have information from Riverside on the skills needed for the current and future workforce of the hospital. In addition, there are many areas where the local schools/school districts can partner with the hospital to better serve our community. Based on my observation, the top three priorities for community health are to target the needs of: (1) older/aging adults; (2) working families (above, below, and at the poverty line); and, (3) K-12 students. After collecting data on the needs of the preceding populations, use this information to prioritize, plan, and streamline health offerings and services. At the same time, for the services that are needed, but not offered at Riverside, become a broker to assist the community with accessing the health services needed to address specific health issues/problems. Also, I hear that Mary Washington Hospital will be taking over the Mid-Rivers Cancer/Radiology Center in Montross. I do not know if Riverside is partnering with Mary Washington Hospital on the venture.
4	• Inform public of services offered at all practices (CDL physicals, pediatric services/vaccines, procedures, etc.). Also should inform public of practices that do (or do not) offer chronic pain management so there's not a lapse in care if physicians who offer this service leave the area.
5	• Must develop care plan for senior citizens to include: • Housing • Around the clock care
6	• Please build and staff an ambulatory clinic and provide ems transport to it
7	• Prevention care Affordable options for people living on a fixed income
8	• Private enterprise... less government involvement
9	• Smoking in or around the entrance to many restaurants and Hospitals
10	• There needs to be more of a team approach to individual and community health problems. Sharing of information and coordination (defragmentation) of care in a seamless fashion is paramount. Adoption of health in policy by community leaders is an important step to improving overall health and lowering costs through prevention.
11	• Transportation, proper nutrition and financial resources to purchase medications, pay co-pays, etc. are great needs.
12	• Working together to maximize services is essential and stop working in silos is key.

Appendix C: Data Sources

Section	Source
Part I. Community Survey Results	
1) Community Survey results as shown throughout Part 1.	Community Health Solutions analysis of *Community Survey* responses submitted by community stakeholders.
Part II. Community Indicator Profile	
1) Health Demographic Trend Profile 2) Health Demographic Snapshot (also Appendix A. Maps 1-13)	Community Health Solutions analysis of demographic estimates from Alteryx, Inc. (2014 and 2019). Alteryx, Inc., is a commercial vendor of demographic data. Note that demographic estimates may vary from other sources of local demographic indicators.
3) Mortality Profile (also Appendix A. Maps 14-17)	Community Health Solutions analysis of Virginia Department of Health death record data (2013). Locality-Level counts and rates were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
4) Maternal and Infant Health Profile (also Appendix A. Maps 18-19)	Community Health Solutions analysis of Virginia Department of Health death record data (2013). Locality-Level counts and rates were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
5) Preventable Hospitalization Profile (also Appendix A. Map 20) 6) Behavioral Health Hospitalization Profile (also Appendix A. Map 21)	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2013 dataset and demographic estimates from Alteryx, Inc. (2013). Data include discharges for Virginia residents from Virginia hospitals reporting to Virginia Health Information, Inc.) The analysis includes records of discharges of Virginia residents from Virginia hospitals excluding state and federal facilities. Data reported are based on the patient's primary diagnosis. **Preventable Hospitalizations**. The prevention quality indicator (PQI) definitions are based on definitions published by the Agency for Healthcare Research and Quality (AHRQ). The definitions are detailed in their specification of ICD-9 diagnosis codes and procedure codes. Not every hospital admission for congestive heart failure, bacterial pneumonia, etc. is included in the PQI definition; only those meeting the detailed specifications. Low birth weight is one of the PQI indicators, but for the purpose of this report, low birth weight is included in the Maternal and Infant Health Profile. Also, there are four diabetes-related PQI indicators which have been combined into one for the report. Within the Exhibits, the *All PQI Discharges* figures are based on an AHRQ methodology that counts a hospital discharge with multiple PQI diagnoses as one discharge. By comparison, the figures for individual discharges do include a small number of cases in which a single hospital discharge with more than one PQI diagnosis would be counted more than once. Also, AHRQ refined their method to exclude the perforated appendix PQI from its list, but this diagnosis is included in the data used for this study. As a result of these methodological factors, the sum of the individual PQI discharges may be slightly different than the total for All PQI Discharges. These differences or on the order of less than one percent. For more information on the AHRQ methodology, visit the AHRQ website at www.qualityindicators.ahrq.gov/pqi_overview.htm *NOTE: Virginia Health Information (VHI) requires the following statement to be included in all reports utilizing its data: VHI has provided non-confidential patient level information used in this report which was compiled in accordance with Virginia law. VHI has no authority to independently verify this data. By accepting this report the requester agrees to assume all risks that may be associated with or arise from the use of inaccurately submitted data. VHI edits data received and is responsible for the accuracy of assembling this information, but does not represent that the subsequent use of this data was appropriate or endorse or support any conclusions or inferences that may be drawn from the use of this data.*

Section	Source
7) Adult Health Risk Factor Profile (also Appendix A. Maps 22-25)	Estimates of chronic disease and risk behaviors for adults 18+ were produced by Community Health Solutions using: • A multi-year dataset (2006-2010) from the Virginia Behavioral Risk Factor Surveillance System (BRFSS). For more information on BRFSS visit: http://www.cdc.gov/brfss/about/index.htm • Local demographic estimates from Alteryx, Inc. (2014) Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. In this model, state-level data were used to predict local counts and rates, with adjustments for local demographics. Consequently, differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are not provided in this report. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates.
8) Youth Health Risk Factor Profile (also Appendix A. Maps 26)	Estimates of risk behaviors for youth age 14-19 and 10-14 were produced by Community Health Solutions using: • Data from the Virginia Youth Risk Behavioral Surveillance System from the Centers for Disease Control (2013). For more information on YRBSS visit: http://www.cdc.gov/HealthyYouth/yrbs/index.htm • Local demographic estimates from Alteryx, Inc. (2014). Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. In this model, state-level data were used to predict local counts and rates, with adjustments for local demographics. Consequently, differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are not provided in this report. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. Likewise, it is not possible to calculate the statistical significance of differences between local rates and state rates.
9) Uninsured Profile (also Appendix A. Maps 27-28)	Estimates of uninsured nonelderly age 0-64 were produced by Community Health Solutions using: • U.S. Census Bureau Small Area Health Insurance Estimates (2013). For more information, visit: http://www.census.gov/did/www/sahie/data/index.html. • Local demographic estimates from Alteryx, Inc. (2014) Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. In this model, prior year locality-level rates were used to predict current year counts and rates, with adjustments for local demographics. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. Likewise, it is not possible to calculate the statistical significance of differences between local rates and state rates. Additionally, populations in group living quarters (e.g. colleges) and undocumented populations may not be adequately addressed in this model.
10) Medically Underserved Profile	Community Health Solutions analysis of U.S. Health Resources and Services Administration data. For more information, visit: http://muafind.hrsa.gov/.

Appendix D: Community Survey Recipients

The following organizations were included in the initial survey distribution. The list of those who responded is on page 19. It is possible that not every group received the initial survey due to challenges collecting correct contact information for all of the individuals. In many cases, multiple individuals at an organization were sent the survey. For example, every member of the County Boards of Supervisors were sent the survey. Additionally, every physician, nurse practitioner and physician assistant at Riverside Medical Group was sent a survey.

Category	Organization	Notes
FAITH COMMUNITIES	• Hospital chaplains • Northern Neck Association of Church Nurses • New Liberty Baptist Church • Tappahannock Seventh Day Adventist Church • First Baptist Church – Lorretto • Essex Churches Together	These individuals can represent both the needs of the local government as well as representing the input of the broader community, and in some cases the minority populations who attend the place of worship.
CHAMBERS OF COMMERCE	• Essex County Chamber of Commerce • Richmond County Chamber of Commerce • Northumberland County Chamber of Commerce • Lancaster by the Bay Chamber of Commerce • King William County Chamber of Commerce	
PUBLIC HEALTH EXPERTS	• Three Rivers Health District of the Virginia Department of Health • Middle Peninsula Northern Neck Community Services Board	
COUNTY / LOCAL GOVERNMENT	• Essex County Board of Supervisors • Essex County Administrator • Essex County Sheriff • Essex County Emergency Management • Essex County Social Services • Tappahannock Mayor • Tappahannock Vice Mayor • Tappahannock Council Members • Tappahannock Chief of Police • Tappahannock Town Manager • Richmond County Board of Supervisors • Richmond County Administrator • Richmond County Emergency Services • Richmond County Social Services • Warsaw Mayor • Warsaw Vice Mayor • Warsaw Council Members • Warsaw Chief of Police • Warsaw Town Manager • Northumberland County Board of Supervisors • Northumberland County Administrators • Northumberland County Sheriff	While sheriffs and first responders may represent public health issues, the intent is for the various representatives on the Boards of Supervisors to present their neighborhoods, including low income and minority members of their communities.

	• Northumberland County Emergency Services • Northumberland County Social Services • Westmoreland County Board of Supervisors • Westmoreland County Administrator • Westmoreland County Sheriff • Westmoreland County Emergency Services • Westmoreland County Social Services • Lancaster County Board of Supervisors • Lancaster County Administrator • Lancaster County Sheriff • Lancaster County Emergency Services • Lancaster County Social Services • King William Board of Supervisors • King William Administrator • King William Sheriff • King William Emergency Services • King William Social Services • Extension Agent • Virginia Senate (4th and 3rd Districts) • Virginia House of Delegates (98th and 99th Districts)	
HEALTHCARE ORGANIZATIONS	• Bay Aging • Bay Rivers Telehealth Alliance • Carrington Place • Central Virginia Health Services • King William Pharmacy • Commonwealth Assisted Living • Northern Neck Free Health Clinic • Northumberland Family YMCA • Richmond County YMCA • Tappahannock Pharmacy • Tappahannock Regional Free Clinic • Westmoreland Family YMCA • Riverside – The Orchard • Riverside Tappahannock Hospital Board Members • Riverside Tappahannock Hospital • Riverside Medical Group Physicians and Advanced Practice Providers • King & Queen Family Practice • Westmoreland Medical Center • King William – Dawn Community Doctors • Bay Internists	These organizations work to represent the medically underserved, low income, minority and broad populations across Virginia's Northern Neck, as well as the health of the local environment on which the local economy is based.
SCHOOLS	• Essex County School Board Members • Essex County Schools Superintendent • Richmond County School Board Members • Richmond County Schools Superintendent • Northumberland County School Board Members • Northumberland County Schools Superintendent • Westmoreland County School Board Members • Westmoreland County Schools Superintendent • Lancaster County School Board Members • Lancaster County Schools Superintendent	

	• King William County School Board Members • King William County School Superintendent • Colonial Beach School Board Members • Colonial Beach Schools Superintendent •	