Sentara CarePlex Hospital
Community Health Needs Assessment
2013

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Sentara CarePlex Hospital

Community Health Needs Assessment

Introduction

Sentara CarePlex Hospital has conducted a community health needs assessment of the area that we serve. The assessment provides us with a picture of the health status of the residents in our communities and provides us with information about health and health-related problems that impact health status.

Our assessment includes a review of population characteristics such as age, educational level, and racial and ethnic composition because these factors can impact health. The assessment also looks at risk factors like obesity and smoking and health indicators such as infant mortality and preventable hospitalizations. Community input is important so the assessment also includes survey results from local health departments, the school system, social services, community health centers, free clinics, local governments, and many others. In the following pages, additional information on the assessment process and findings can be found.

The needs assessment identifies numerous health issues that our communities face. While there are many important health matters, we are focusing our efforts on the health issues listed below. Considering factors such as size and scope of the health problem, the intensity and severity of the issue, the potential to effectively address the problem and the availability of community resources, and Sentara's mission "to improve health every day", we have identified these priority health problems in our area:

- Healthcare for the uninsured and underinsured
- Obesity
- Behavioral health and substance abuse
- Cancer
- Diabetes
- Senior services

The community health needs assessment was used as the foundation for a hospital implementation strategy to address these priority needs. The assessment and implementation strategy have been adopted by the hospital's governing body. A number of resources are available in the community to address these needs through community partners such as the local health departments, United Way Agencies, and others. Information about these resources is available from sources like 2-1-1 Virginia and Sentara.com. Together, we will work to improve the health of the communities we serve.

Your input is important to us so that we can incorporate your feedback into our assessments. You may use our online feedback form available on the Sentara.com website. Thanks!

A Community Health Needs Assessment

Prepared for the Sentara CarePlex Hospital

By Community Health Solutions

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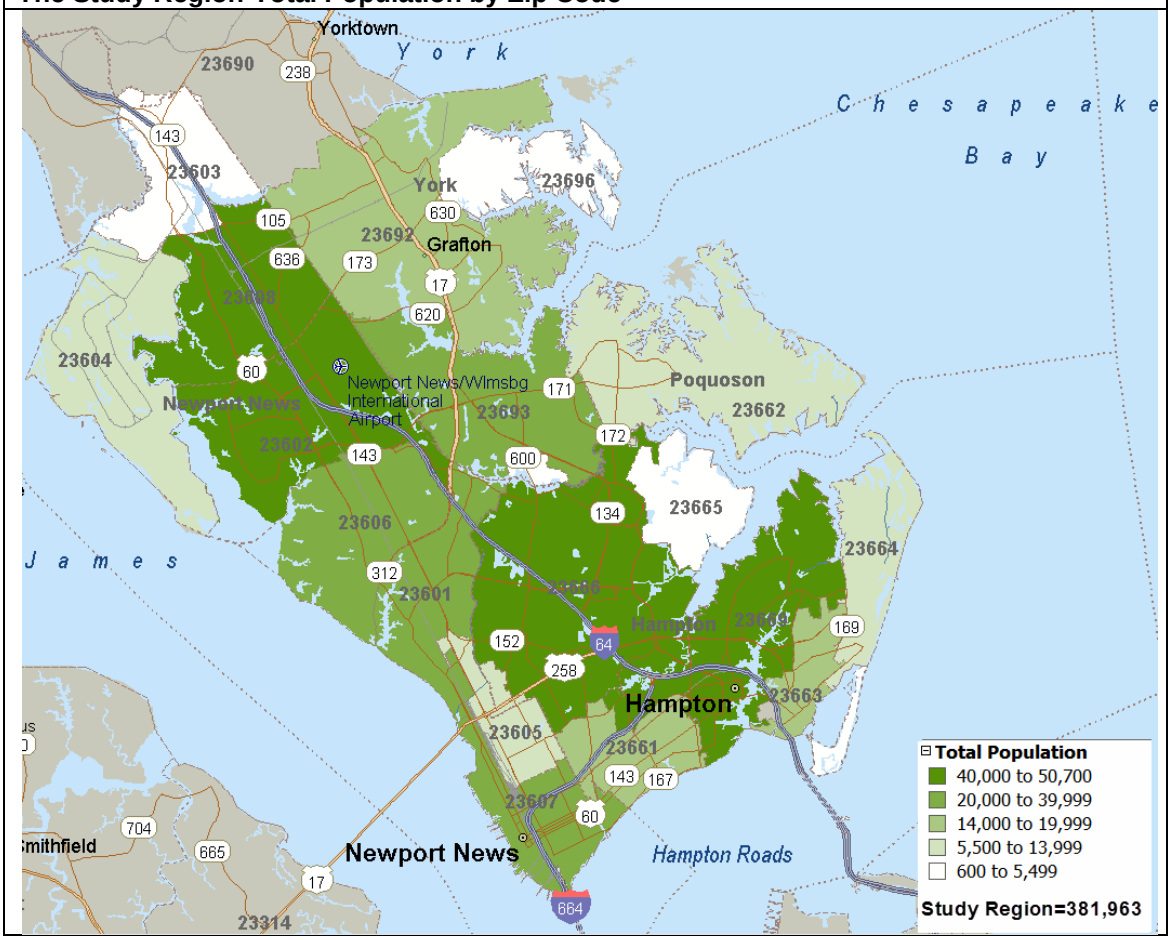
Executive Summary

The mission of the Sentara CarePlex Hospital (SCH) is "to improve health every day." With this mission in mind, SCH commissioned Community Health Solutions to conduct this community health needs assessment.

The study focuses on the SCH service area of 19 zip codes, most of which fall within the cities of Hampton, Newport News and Poquoson; and York County. The study region is shown in the map below. The results of the study include two primary components: a 'community insight profile' based on qualitative analysis of a survey of community stakeholders, and a 'community indicator profile' based on quantitative analysis of community health status indicators. This Executive Summary outlines major findings, and details are provided in the body of the report.

The Study Region-Total Population by Zip Code



Part I. Community Insight Profile

In an effort to generate community input for the study, a Community Insight Survey was conducted with a group of community stakeholders identified by SCH. The survey participants were asked to provide their viewpoints on:

- Important health concerns in the community;
- Significant service gaps in the community; and
- Additional ideas or suggestions for improving community health.

The survey was sent to a group of 128 community stakeholders identified by SCH. A total of 41 (32%) submitted a response (although not every respondent answered every question). The respondents provided rich insights about community health in the study region. To summarize:

- The respondents identified over 20 important health concerns such as obesity, chronic disease, illegal drug substance abuse, alcohol use and more.

- The respondents reported more than two dozen specific community services in need of strengthening. Commonly identified services included aging services, behavioral health services, health care services for the uninsured/underinsured, health care insurance coverage and more.

Fourteen respondents offered open-ended responses with additional ideas and suggestions for improving community health. These responses are listed in *Appendix B* on page 37.

Part II. Community Indicator Profile

The community indicator profile in Part II presents a wide array of quantitative community health indicators for the study region. To produce the profile, 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. To summarize:

- *Demographic Profile.* As of 2012, the study region included an estimated 381,963 people. The population is expected to increase to 387,482 by 2017. Compared to the Commonwealth of Virginia as a whole, the study region is more densely populated, has (proportionally) more adults age 18-29, and fewer adults age 30-44. With regards to racial/ethnic composition, the study region has (proportionally) more Black/African American residents and fewer residents of Hispanic ethnicity. The study region also has fewer adults age 25+ without a high school education and more households with lower income levels than Virginia as a whole.

- *Mortality Profile.* The study region had 2,862 total deaths in 2011. The leading causes of death were malignant neoplasms (cancer), heart disease and cerebrovascular diseases (stroke). The study region death rate per 100,000 population was higher than the statewide rate for all age groups.

- *Maternal and Infant Health Profile.* The study region had 5,326 total live births in 2011. Compared to Virginia as a whole, the study region had a comparable rate of low weight births, a lower rate of births without early prenatal care, and a higher rate of non-marital births. In 2011, teen pregnancy rates for the cities of Hampton and Newport News were higher than the statewide rate. The five-year infant mortality rates for the cities of Hampton, Newport News and Poquoson were also higher than the statewide rate.

- *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. Residents of the study region had 3,545 PQI hospital discharges from Virginia hospitals in 2011. The leading diagnoses for these discharges were congestive heart failure, diabetes and bacterial pneumonia. The study region PQI discharge rates per 100,000 population were higher than the statewide rates for residents age 18-64.

- *Behavioral Health Hospitalization Discharge Profile.* Behavioral Health (BH) hospitalizations provide another important indicator of community health status. Residents of the study region had 2,584 hospital discharges from Virginia hospitals for behavioral health conditions in 2011.[1] The leading diagnoses for these discharges were affective psychoses, general symptoms[2] and schizophrenic disorders. The study region behavioral health hospitalization discharge rate per 100,000 population was higher than the statewide rate for seniors age 65+.

- *Adult Health Risk Profile.* Local estimates indicate that substantial numbers of adults (age 18+) in the study region have health risks related to nutrition, physical inactivity, weight, tobacco, and alcohol. In addition, substantial numbers of adults have chronic conditions such as high blood pressure, arthritis, high cholesterol, diabetes and asthma.

[1] Data include discharges for Virginia residents from Virginia community hospitals reporting to Virginia Health Information, Inc. These data do not include discharges from state behavioral health facilities or federal (military) facilities. Data reported are based on the primary diagnosis.
[2] This diagnosis includes symptoms, signs, abnormal results of laboratory or other investigative procedures, and ill-defined conditions regarding which no diagnosis classifiable elsewhere is recorded.

- *Youth Health Risk Profile.* Local estimates indicate that substantial numbers of youth (age 14-19) in the study region have health risks related to nutrition, physical inactivity, weight, tobacco, alcohol and mental health.

- *Uninsured Profile*. An estimated 48,716 (21%) nonelderly residents of the study region were uninsured at any point in time in 2012. This included an estimated 7,360 children and 41,357 adults.

- *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+. Three of the four localities included in the study region (cities of Hampton and Newport News; and York County) are partially designated as MUAs/MUPs.

Accompanying File of Zip Code Level Indicators

This report includes community health indicators for the study region as a whole. A separate Microsoft Excel file contains indicators for each zip code within the study region.

Appendix A: Zip Code Level Maps

Appendix A provides a set of thematically colored maps displaying variation in selected community health indicators by zip code. The underlying data for these maps are provided in a separate Microsoft Excel file. *Please read the important technical notes about zip code level data.*

Appendix B: Community Insight Profile-Additional Ideas and Suggestions for Improving Community Health

Fourteen survey respondents offered open-ended responses with additional ideas and suggestions for improving community health. These responses are listed in *Appendix B* on page 37.

Appendix C: Data Sources

Appendix C provides a list of the data sources used in the analyses for this report.

Part I. Community Insight Profile

In an effort to generate community input for the study, a Community Insight Survey was conducted with a group of community stakeholders identified by SCH. The survey participants were asked to provide their viewpoints on:

- Important health concerns in the community;
- Significant service gaps in the community; and
- Additional ideas and suggestions for improving community health.

The survey was sent to a group of 128 community stakeholders identified by SCH. A total of 41 (32%) submitted a response (although not every respondent answered every question). The respondents provided rich insights about community health in the study region. The results are summarized in the remainder of this section.

1. Survey Respondents

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

Exhibit I-1
Reported Organization Affiliation of Survey Respondents

Alpha Phi Alpha Fraternity/Delta Beta Lambda Chapter	Old Hampton Family Medical Associates, PC
Big Brothers Big Sisters	Optima Health
Boo Williams Summer League, State Farm	Patient First
C and F Bank	Peninsula Agency on Aging, Inc.
Center For Weight Loss Success	Peninsula Emergency Physicians (2)
City of Hampton (2)	Peninsula Health Department
Concerned Adults Teaching Children Hope	Peninsula Metropolitan YMCA
Dale Carnegie Training of Eastern Virginia	Project CARE of the Greater Virginia Peninsula, Inc.
Embassy Suites Hampton Roads	Retired (2)
Former Sentara Board Member	Robert Brown and Associates, Inc.
Gloucester-Mathews Free Clinic	Sentara
H.E.L.P., Inc.	Sentara Center for Health and Fitness
Hampton Roads Sanitation District	Sentara Medical Group
Hampton University Proton Therapy Institute	Tidewater Orthodontics
Hampton-Newport News Community Services Board	Union First Market Bank
Kaufman and Canoles, P.C.	Virginia Peninsula Chamber of Commerce
Lackey Free Clinic	Yeargin's Landscaping Services, Inc.
Mac Mannes, Inc.	*Unknown Organization (2)*
Naval Medical Center Portsmouth	

2. 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. *Exhibit I-2* summarizes the results, including open-ended responses.

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

Answer Options	Response Percent	Response Count
Adult Obesity	88%	36
High Blood Pressure	73%	30
Diabetes	68%	28
Cancer	63%	26
Heart Disease	63%	26
Childhood Obesity	61%	25
Substance Abuse-Illegal Drugs	56%	23
Alcohol Use	51%	21
Alzheimer's Disease	49%	20
Substance Abuse-Prescription Drugs	46%	19
Tobacco Use	46%	19
Depression	39%	16
Mental Health Conditions (other than depression)	37%	15
Chronic Pain	34%	14
Infant and Child Health	34%	14
Prenatal & Pregnancy Care	34%	14
Arthritis	32%	13
Sexually Transmitted Diseases	32%	13
Stroke	32%	13
Dental Care/Oral Health-Adult	29%	12
Teen Pregnancy	27%	11
Asthma	24%	10
Infectious Diseases	22%	9
Orthopedic Problems	22%	9
Renal (kidney) Disease	20%	8
Autism	17%	7
Domestic Violence	17%	7
Intellectual/Developmental Disabilities	17%	7
Physical Disabilities	17%	7
Injuries	15%	6
Dental Care/Oral Health-Pediatric	12%	5
HIV/AIDS	12%	5
Respiratory Diseases (other than asthma)	12%	5
Neurological Disorders (seizures, multiple sclerosis)	7%	3
Environmental Quality	5%	2
Other Health Problems (see next page)	*17%*	*7*

Note: 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.

Continued on next page…

Exhibit I-2. (continued)

Open-Ended Responses
• I'm acutely aware of heart disease resulting from obesity and diabetes. It seems that this condition is almost epidemic among middle-aged men, at least in my peer group.
• Community using the emergency room for non-emergency situations
• Dementia and senior-related issues
• Elderly without family care
• GEED and Allergies
• Need additional resources for pregnant women and child birth centers.
• These items checked refer to the issues of clientele of the CSB, many of which are not addressed adequately, primarily due to lack of health care coverage.

3. 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. *Exhibit I-3* summarizes the results, including open-ended responses.

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

Answer Options	Response Percent[3]	Response Count
Aging Services	56%	22
Behavioral Health Services (including mental health, substance use and intellectual disability)	56%	22
Health Care Services for the Uninsured and Underinsured	49%	19
Health Care Insurance Coverage (private and government)	46%	18
Homeless Services	41%	16
Cancer Services (screening, diagnosis, treatment)	38%	15
Health Promotion and Prevention Services	38%	15
Patient Self Management Services (e.g. nutrition, exercise, taking medications)	38%	15
Long Term Care Services	33%	13
Chronic Disease Services (including screening and early detection)	28%	11
Family Planning Services	28%	11
Chronic Pain Management Services	26%	10
Dental Care/Oral Health Services-Adult	26%	10
Food Safety Net (food bank, community gardens)	23%	9
Hospice Services	23%	9
Early Intervention Services for Children	21%	8
Primary Health Care Services	21%	8
Public Health Services	21%	8
Transportation	21%	8
Domestic Violence Services	15%	6
Maternal, Infant & Child Health Services	15%	6
Social Services	15%	6
Home Health Services	13%	5
Dental Care/Oral Health Services-Pediatric	10%	4
Job/Vocational Retraining	10%	4
School Health Services	10%	4
Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	10%	4
Workplace Health and Safety Services	10%	4
Physical Rehabilitation	8%	3
Hospital Services (including emergency, inpatient and outpatient)	5%	2
Pharmacy Services	5%	2
Environmental Health Services	0%	0
Other Community Health Services (see next page)	*10%*	*4*

Note: 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.

Continued on next page…

[3] *Thirty-nine (39) of the 41 survey respondents answered this question.*

Exhibit I-2. (continued)

Open-Ended Responses
• Caretaker training to take care of elder parents
• Health care invoicing is always confusing and difficult to understand.
• Medicare participating health services
• The primary concern is that many adult clientele of the CSB do not have health care coverage/Medicaid/Medicare. In addition, almost none of our adult clients have dental care coverage.

Part II. Community Indicator Profile

This section of the report provides a quantitative profile of the study region based on a wide array of community health indicators. To produce the profile, 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.

The results of this profile can be used to evaluate community health status compared to the Commonwealth of Virginia overall. The results can also be helpful for determining the number of people affected by specific health concerns. In addition, the results can be used alongside the Community Insight Survey results and the zip code level maps to help inform action plans for community health improvement. This section includes ten profiles as follows:

1. Health Demographic Trend Profile
2. Health Demographic Snapshot Profile
3. Mortality Profile
4. Maternal and Infant Health Profile
5. Preventable Hospitalization Discharge Profile
6. Behavioral Health Hospitalization Discharge Profile
7. Adult Health Risk Factor Profile
8. Youth Health Risk Factor Profile
9. Uninsured Profile
10. Medically Underserved Profile

1. Health Demographic Trend 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 2012, the study region included an estimated 381,963 people. The population is expected to increase to 387,482 by 2017. It is projected that population growth will occur in most age groups, including a 7% increase in seniors age 65+. Focusing on racial background, the population is projected to remain steady or increase for all groups. The Hispanic population is also expected to grow by 4%.

Exhibit II-1.
Health Demographic Trend Profile, 2010-2017

Indicator	2010 Census	2012 Estimate	2017 Projection	% Change 2012-2017
Total Population	380,577	381,963	387,482	1%
Population Density (per Sq Mile)	2,011.6	2,018.9	2,048.1	1%
Total Households	148,603	149,724	153,062	2%
Population by Age				
Children Age 0-17	91,670	90,288	89,953	0%
Adults Age 18-29	76,255	75,099	76,756	2%
Adults Age 30-44	70,128	70,169	71,612	2%
Adults Age 45-64	98,737	100,474	99,938	-1%
Seniors Age 65+	43,794	45,936	49,217	7%
Population by Race/Ethnicity				
Asian	10,972	11,330	12,037	6%
Black/African American	146,569	146,989	148,402	1%
White	198,765	198,620	200,950	1%
Other or Multi-Race	24,266	25,023	26,088	4%
Hispanic Ethnicity[4]	22,211	22,887	23,846	4%

Source: Community Health Solutions analysis of US Census data and estimates from Alteryx, Inc.

[4] Classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.

2. Health Demographic Snapshot Profile

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 2012, the study region included an estimated 381,963 people. Compared to the Commonwealth of Virginia as a whole, the study region is more densely populated, has (proportionally) more adults age 18-29, and fewer adults age 30-44. Focusing on racial/ethnic composition, the study region has (proportionally) more Black/African American residents and fewer residents of Hispanic ethnicity. The study region also has fewer adults age 25+ without a high school education and lower income levels than Virginia as a whole. *Note: Maps 1-13 in Appendix A show the geographic distribution of the population by zip code.*

Exhibit II-2.
Health Demographic Snapshot Profile, 2012

Indicator		Study Region	Virginia
Population Counts			
Total	Population	381,963	8,154,815
Age	Children Age 0-17	90,288	1,857,225
	Adults Age 18-29	75,099	1,375,674
	Adults Age 30-44	70,169	1,642,637
	Adults Age 45-64	100,474	2,233,940
	Seniors Age 65+	45,936	1,045,339
Sex	Female	197,062	4,148,680
	Male	184,903	4,006,135
Race	Asian	11,330	459,660
	Black/African American	146,989	1,579,659
	White	198,620	5,573,480
	Other or Multi-Race	25,023	542,016
Ethnicity	Hispanic Ethnicity[5]	22,887	655,986
Income	Low Income Households (Households with Income < $25,000)	30,862	553,382
Education	Population Age 25+ Without a High School Diploma	20,984	675,228
Population Rates			
Total	Population Density (pop. per sq. mile)	2,018.90	202.2
Age	Children Age 0-17 pct. of Total Pop.	24%	23%
	Adults Age 18-29 pct. of Total Pop.	20%	17%
	Adults Age 30-44 pct. of Total Pop.	18%	20%
	Adults Age 45-64 pct. of Total Pop.	26%	27%
	Seniors Age 65+ pct. of Total Pop.	12%	13%
Sex	Female pct. of Total Pop.	52%	51%
	Male pct. of Total Pop.	48%	49%
Race	Asian pct. of Total Pop.	3%	6%
	Black/African American pct. of Total Pop.	38%	19%
	White pct. of Total Pop.	52%	68%
	Other or Multi-Race pct. of Total Pop.	7%	7%
Ethnicity	Hispanic Ethnicity pct. of Total Pop.	6%	8%
Income	Per Capita Income	$27,329	$34,307
	Median Household Income	$54,842	$64,118
	Low Income Households (Households with Income < $25,000) pct. of Total Households	21%	18%
Education	Pop. Age 25+ Without a High School Diploma pct. of Total Pop. Age 25+	8%	12%

Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

[5] Classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.

3. Mortality Profile

Mortality is traditionally one of the most important indicators of community health status. As shown in *Exhibit II-3*, the study region had 2,862 total deaths in 2011. The leading causes of death were malignant neoplasms (cancer) (685), heart disease (637) and cerebrovascular diseases (stroke) (171). The study region death rate per 100,000 population was higher than the statewide rate for all age groups.[6] *Note: Maps 14-17 in Appendix A show the geographic distribution of deaths by zip code.*

Exhibit II-3.
Mortality Profile, 2011

Indicator	Study Region	Virginia
Total Deaths		
Total Deaths by All Causes	2,862	60,325
Deaths by Top 14 Causes		
Malignant Neoplasms Deaths	685	14,261
Heart Disease Deaths	637	13,201
Cerebrovascular Diseases Deaths	171	3,327
Chronic Lower Respiratory Diseases Deaths	131	3,097
Unintentional Injury Deaths	118	2,726
Diabetes Mellitus Deaths	98	1,628
Septicemia Deaths	68	1,372
Alzheimer's Disease Deaths	56	1,800
Nephritis and Nephrosis Deaths	49	1,425
Influenza and Pneumonia Deaths	40	1,404
Suicide Deaths	39	1,052
Primary Hypertension and Renal Disease Deaths	33	569
Chronic Liver Disease Deaths	31	725
Pneumonitis Deaths	22	560
Deaths by Age Group		
Deaths Age 0-17	73	1,024
Deaths Age 18-29	62	1,080
Deaths Age 30-44	90	2,121
Deaths Age 45-64	600	12,338
Deaths Age 65+	2,037	43,758
Death Rates by Age Group[5]		
Total Deaths per 100,000 pop. All Ages	766.9	742.9
Deaths per 100,000 pop. Age 0-17	80.9	53.6
Deaths per 100,000 pop. Age 18-29	83.0	79.0
Deaths per 100,000 pop. Age 30-44	130.8	125.7
Deaths per 100,000 pop. Age 45-64	620.9	576.8
Deaths per 100,000 pop. Age 65+	4,760.5	4,314.5

Source: Community Health Solutions analysis of data from the Virginia Department of Health and estimates from Alteryx, Inc.

[6] Age-adjusted death rates were not calculated for this study because the study region is defined by zip codes, and available data are not structured to support calculation of age-adjusted death rates at the zip code level. Age group death rates are used as an alternative.

4. Maternal and Infant Health Profile

Along with mortality, maternal and infant health is another traditionally important indicator of community health status. As shown in *Exhibit II-4A,* the study region had 5,326 total live births in 2011. Among these were 449 low weight births, 308 births without early prenatal care, 2,432 non-marital births and 432 births to teens. Compared to Virginia as a whole, the study region had a comparable rate of low weight births, a lower rate of births without early prenatal care, and a higher rates of non-marital births. *Note: Maps 18-21 in Appendix A show the geographic distribution of births by zip code.*

Exhibit II-4A.
Maternal and Infant Health Profile, 2011

Indicator	Study Region	Virginia
Counts		
Total Live Births	5,326	102,525
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	449	8,204
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks)	308	13,500
Non-Marital Births	2,432	36,390
Live Births to Teens Age 10-19	432	6,572
Live Births to Teens Age 18-19	322	4,807
Live Births to Teens Age 15-17	103	1,708
Live Births to Teens Age <15	7	57
Rates		
Live Birth Rate per 1,000 Population	14.3	12.7
Low Weight Births pct. of Total Live Births	8%	8%
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks) pct. of Total Live Births	6%	13%
Non-Marital Births pct. of Total Live Births	46%	35%

Source: Community Health Solutions analysis of data from the Virginia Department of Health and estimates from Alteryx, Inc

Exhibit II-4B below provides counts and rates of teen pregnancy and infant mortality for the four localities that include the study region (the cities of Hampton, Newport News, and Poquoson; and York County). [7] In 2011, the teen pregnancy rates for the cities of Hampton and Newport News were higher than the statewide rate. The five-year infant mortality rates for the cities of Hampton, Newport News and Poquoson were also higher than the statewide rate.

Exhibit II-4B.
Teen Pregnancy and Infant Mortality Profile, 2011

Indicator	Hampton City of	Newport News City of	Poquoson City of	York County	Virginia
Teen Pregnancy Counts and Rates					
Total Teenage Pregnancies Age 10-19 (2011)	257	398	9	35	9,630
Total Pregnancies per 1,000 Female Population Age 10-19 (2011)	27.9	33.3	9.7	7.0	18.6
Infant Mortality Counts and Rates					
Total Infant Deaths (2011)	21	30	1	2	685
Five-Year Average Infant Mortality Rate per 1,000 Live Births (2007-2011)	8.9	9.3	12.1	4.0	7.0

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

[7] 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.

5. Preventable Hospitalization Discharge Profile

Preventable hospitalization is a community health indicator that is receiving increasing interest as the health system focuses on patient-centered care and avoidance of unnecessary hospitalization. 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.[8] 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 3,545 PQI hospital discharges from Virginia hospitals in 2011.[9] The leading diagnoses for these discharges were congestive heart failure (911), diabetes (656) and bacterial pneumonia (593). The study region PQI discharge rates per 100,000 population were higher than the statewide rates for residents age 18-64. *Note: Map 22 in Appendix A shows the geographic distribution of PQI discharges by zip code.*

Exhibit II-5.
Prevention Quality Indicator (PQI) Hospital Discharge Profile, 2011

Indicator	Study Region	Virginia
PQI Discharges by Age Group[8]		
All Ages	3,545	83,392
Total PQI Discharges-Age 0-17	13	335
Total PQI Discharges-Age 18-29	222	3,639
Total PQI Discharges-Age 30-44	352	7,190
Total PQI Discharges-Age 45-64	1,151	24,359
Total PQI Discharges-Age 65+	1,807	47,869
PQI Discharges by Diagnosis		
Congestive Heart Failure	911	18,990
Diabetes	656	11,326
Bacterial Pneumonia	593	16,221
Urinary Tract Infection	365	10,496
Chronic Obstructive Pulmonary Disease (COPD)	361	11,439
Adult Asthma	306	6,419
Hypertension	144	2,898
Dehydration	110	3,401
Perforated Appendix	63	1,487
Angina	36	715
PQI Discharge Rates by Age Group		
PQI Discharges per 100,000 pop. All Ages	949.9	1,027.0
PQI Discharges per 100,000 pop. Age 0-17	--	17.5
PQI Discharges per 100,000 pop. Age 18-29	297.1	266.1
PQI Discharges per 100,000 pop. Age 30-44	511.5	426.0
PQI Discharges per 100,000 pop. Age 45-64	1,191.2	1,138.7
PQI Discharges per 100,000 pop. Age 65+	4,222.9	4,719.8

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc. and estimates from Alteryx, Inc.
-- Rates are not calculated where n<30

[8] The PQI 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 three diabetes-related PQI indicators which have been combined into one for the report. For more information, visit the AHRQ website at www.qualityindicators.ahrq.gov/pqi_overview.htm

[9] Data include discharges for Virginia residents from Virginia community hospitals reporting to Virginia Health Information, Inc. These data do not include discharges from state behavioral health facilities or federal (military) facilities. Data reported are based on the primary diagnosis.

6. 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 2,584 hospital discharges from Virginia hospitals for behavioral health conditions in 2011.[10] The leading diagnoses for these discharges were affective psychoses (891), general symptoms (515), and schizophrenic disorders (439). The study region behavioral health hospitalization discharge rate per 100,000 population was higher than the statewide rate for seniors age 65+. *Note: Map 23 in Appendix A shows the geographic distribution of BH discharges by zip code.*

Exhibit II-6.
Behavioral Health Hospital Discharge Profile, 2011

Indicator	Study Region	Virginia
BH Discharges by Age Group[9]		
All Ages	2,584	64,892
Total BH Discharges-Age 0-17	374	7,996
Total BH Discharges-Age 18-29	410	12,297
Total BH Discharges-Age 30-44	560	15,063
Total BH Discharges-Age 45-64	763	19,677
Total BH Discharges-Age 65+	477	9,859
BH Discharges by Diagnosis		
Affective Psychoses [11]	891	27,277
General Symptoms [12]	515	11,135
Schizophrenic Disorders	439	8,042
Depressive Disorder, Not Elsewhere Classified	166	2,785
Alcoholic Psychoses	116	3,283
Other Nonorganic Psychoses	99	2,148
Neurotic Disorders	65	1,351
Alcoholic Dependence Syndrome	59	2,161
Adjustment Reaction	58	2,123
Drug Psychoses	57	1,321
BH Discharge Rates by Age Group		
BH Discharges per 100,000 pop. All Ages	692.4	799.2
BH Discharges per 100,000 pop. Age 0-17	414.5	418.4
BH Discharges per 100,000 pop. Age 18-29	548.7	899.0
BH Discharges per 100,000 pop. Age 30-44	813.7	892.4
BH Discharges per 100,000 pop. Age 45-64	789.6	919.8
BH Discharges per 100,000 pop. Age 65+	1,114.7	972.1

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc. and estimates from Alteryx, Inc.

[10] Data include discharges for Virginia residents from Virginia community hospitals reporting to Virginia Health Information, Inc. These data do not include discharges from state behavioral health facilities or federal (military) facilities. Data reported are based on the primary diagnosis.
[11] Includes major depressive, bipolar affective and manic depressive disorders.
[12] This diagnosis includes symptoms, signs, abnormal results of laboratory or other investigative procedures, and ill-defined conditions regarding which no diagnosis classifiable elsewhere is recorded.

7. Adult Health Risk Factor 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. *Exhibit II-7* shows estimates indicating that substantial numbers of adults in the study region have health risks related to nutrition, physical inactivity, weight, tobacco and alcohol. In addition, substantial numbers of adults have chronic conditions such as high blood pressure, arthritis, high cholesterol, diabetes and asthma. *Note: Maps 24-27 in Appendix A show the geographic distribution of selected adult health risks by zip code.*

Exhibit II-7.
Adult Health Risk Factor Profile (Estimates), 2012

Indicator	Study Region Estimates (Count)	Study Region Estimates (Percent)
Estimated Adults age 18+	291,678	100%
Risk Factors		
Less than Five Servings of Fruits and Vegetables Per Day*	228,339	78%
Overweight or Obese[13]	180,174	62%
Not Meeting Recommendations for Physical Activity in the Past 30 Days	154,001	53%
Smoker*	57,233	20%
At Risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	55,392	19%
Chronic Conditions		
High Cholesterol (was checked, and told by a doctor or other health professional it was high)*	102,493	35%
High Blood Pressure (told by a doctor or other health professional)*	83,995	29%
Arthritis (told by a doctor or other health professional)*	70,581	24%
Diabetes (told by a doctor or other health professional)*	26,172	9%
Asthma (told by a doctor or other health professional)*	20,132	7%
General Health Status		
Limited in any Activities because of Physical, Mental or Emotional Problems*	59,689	20%
Fair or Poor Health Status*	43,840	15%

** Indicators are based on respondents self report. Other indicators are calculated by Centers for Disease Control based on Virginia Behavioral Risk Factor Behavioral Surveillance Survey results.*

Source: Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc.

[13] According to the CDC, for adults 20 years old and older, BMI is interpreted using standard weight status categories that are the same for all ages and for both men and women. Overweight is defined as a BMI between 25.0 and 29.9. Obesity is defined as a BMI 30.0 and above. For more information: http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html#Interpreted

8. Youth Health Risk Factor Profile

This section examines selected health risks for youth age 14-19. These risks have received increasing attention as the population of American children have 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.

Exhibit II-8 shows estimates indicating that substantial numbers of youth in the study region have health risks related to nutrition, weight, physical activity, tobacco, alcohol and mental health. *Note: Maps 28-29 in Appendix A shows the geographic distribution of selected youth health risks by zip code.*

Exhibit II-8.
Youth Health Risk Factor Profile (Estimates), 2012

Indicator	Study Region Estimates (Count)	Study Region Estimates (Percent)
Estimated Youth age 14-19	32,219	100%
Less than the Recommended Intake of Vegetables	28,621	89%
Less than the Recommended Intake of Fruit	27,469	85%
Overweight or Obese[14]	10,109	31%
Have at least One Drink of Alcohol at least One Day in the Past 30 Days*	8,886	28%
Feel Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)*	8,036	25%
Used Tobacco in the Past 30 Days*	5,977	19%
Not Meeting Recommendations for Physical Activity in the Past Week*	5,200	16%

** Indicators are based on respondents self report. Other indicators are calculated by Centers for Disease Control based on Virginia Youth Risk Behavioral Surveillance Survey results.*

Source: Estimates based on Community Health Solutions analysis of Virginia Youth Risk Behavioral Surveillance System data and estimates from Alteryx, Inc.

[14] For children and adolescents (aged 2–19 years), the BMI value is plotted on the CDC growth charts to determine the corresponding BMI-for-age percentile. Overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile. Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex. For more information: http://www.cdc.gov/healthyweight/assessing/bmi/childrens_BMI/about_childrens_BMI.html

9. 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 as a percent of the federal poverty level (FPL) in the study region as of 2012.[15] An estimated 48,716 (21%) nonelderly residents of the study region were uninsured at any point in time in 2012. This included an estimated 7,360 children and 41,357 adults. *Note: Maps 30-31 in Appendix A show the geographic distribution of the uninsured population by zip code.*

Exhibit II-9.
Uninsured Profile (Estimates)[16], 2012

Indicator	Study Region
Estimated Uninsured Counts	
Uninsured Nonelderly Age 0-64	48,716
Uninsured Children Age 0-18	7,360
Uninsured Children <100% FPL	2,320
Uninsured Children 100-200% FPL	2,830
Uninsured Children 201-300% FPL	1,136
Uninsured Children 301%+ FPL	1,074
Uninsured Adults Age 19-64	41,357
Uninsured Adults <100% FPL	18,600
Uninsured Adults 100-200% FPL	10,779
Uninsured Adults 201-300% FPL	6,335
Uninsured Adults 301%+ FPL	5,642
Uninsured Adults Under 133% FPL[17]	19,872
Estimated Uninsured Rates	
Uninsured Nonelderly Percent	21%
Uninsured Children Percent	8%
Uninsured Adults Percent	18%

Source: Community Health Solutions estimates based on Community Health Solutions analysis of Profile of the Uninsured report produced for Virginia Health Care Foundation by the Urban Institute and estimates from Alteryx, Inc.

[15] For more information, please see: http://aspe.hhs.gov/poverty/12poverty.shtml
[16] One zip code in the study region was removed from the uninsured analysis because its population was largely military.
[17] Uninsured Adults Under 133% FPL are included in the <100 and 100-200% FPL income categories. This separate income level has been included in the table to provide an estimate of uninsured adults who may be eligible for health coverage under Medicaid expansion.

10. Medically Underserved Profile

Medically Underserved Areas (MUAs) and Medically Underserved Populations (MUPs) are designated by the U.S. Health Resources and Services Administration (HRSA) 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+.

As shown in *Exhibit II-10*, three of the four localities included in the study region (cities of Hampton and Newport News; and York County) are partially designated as MUAs/MUPs. 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 Area/Population Profile

Locality	MUA/MUP Designation	Census Tracts
Hampton, City of	Partial	22 of 33 Census Tracts
Newport News, City of	Partial	17 of 44 Census Tracts
Poquoson, City of	None	---
York County	Partial	3 of 14 Census Tracts

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

APPENDIX A: Zip Code Level Maps for the Study Region

The maps in this section illustrate the geographic distribution of the study region population on key demographic and health indicators by zip code. The maps can be used alongside the Community Insight Survey (Part I) and the Community Indicator Profile (Part II) to help inform plans for community health initiatives. The underlying data for these maps are provided in a separate Microsoft Excel file. The maps in this section include the following for 2011/2012:

1. Total Population, 2012	17. Cerebrovascular Diseases (Stroke) Deaths, 2011
2. Population Density (population per square mile), 2012	18. Total Live Births, 2011
3. Child Population Age 0-17, 2012	19. Low Weight Births, 2011
4. Senior Population Age 65+, 2012	20. Births Without Early Prenatal Care (No Prenatal Care in the First 13 Weeks), 2011
5. Asian Population, 2012	21. Births to Teen Mothers Under Age 18, 2011
6. Black/African American Population, 2012	22. Prevention Quality Indicator (PQI) Hospital Discharges, 2011
7. White Population, 2012	23. Behavioral Health (BH) Hospital Discharges, 2011
8. Other or Multi-Race Population, 2012	24. Estimated Adults Age 18+ Overweight or Obese, 2012
9. Hispanic Ethnicity Population, 2012	25. Estimated Adult Age 18+ Smokers, 2012
10. Per Capita Income, 2012	26. Estimated Adults Age 18+ with Diabetes, 2012
11. Median Household Income, 2012	27. Estimated Adults Age 18+ with High Blood Pressure, 2012
12. Low Income Households (Households with Income <$25,000), 2012	28. Estimated Youth Age 14-19 Overweight or Obese, 2012
13. Population Age 25+ Without a High School Diploma, 2012	29. Estimated Youth Age 14-19 Not Meeting Recommendations for Physical Activity in the Past Week, 2012
14. Total Deaths, 2011	30. Estimated Uninsured Children Age 0-18, 2012
15. Malignant Neoplasm (Cancer) Deaths, 2011	31. Estimated Uninsured Adults Age 19-64, 2012
16. Heart Disease Deaths, 2011	

Technical Notes

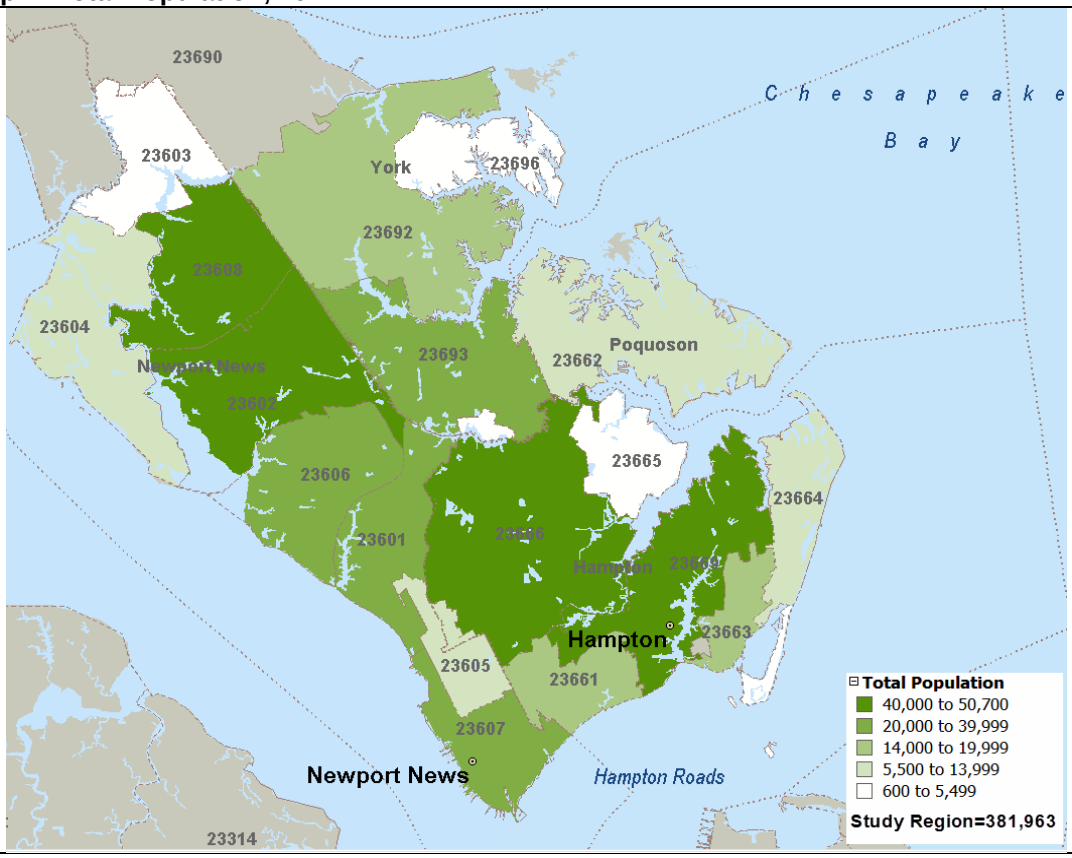
1. The study focuses on the Sentara CarePlex Hospital (SCH) service area of 19 zip codes, most of which fall within the cities of Hampton, Newport News and Poquoson; and York County. Because zip code boundaries do not automatically align with city/county borders, there are some zip codes that extend beyond city/county boundaries.

2. With the exception of population density, per capita income and median household income, 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.

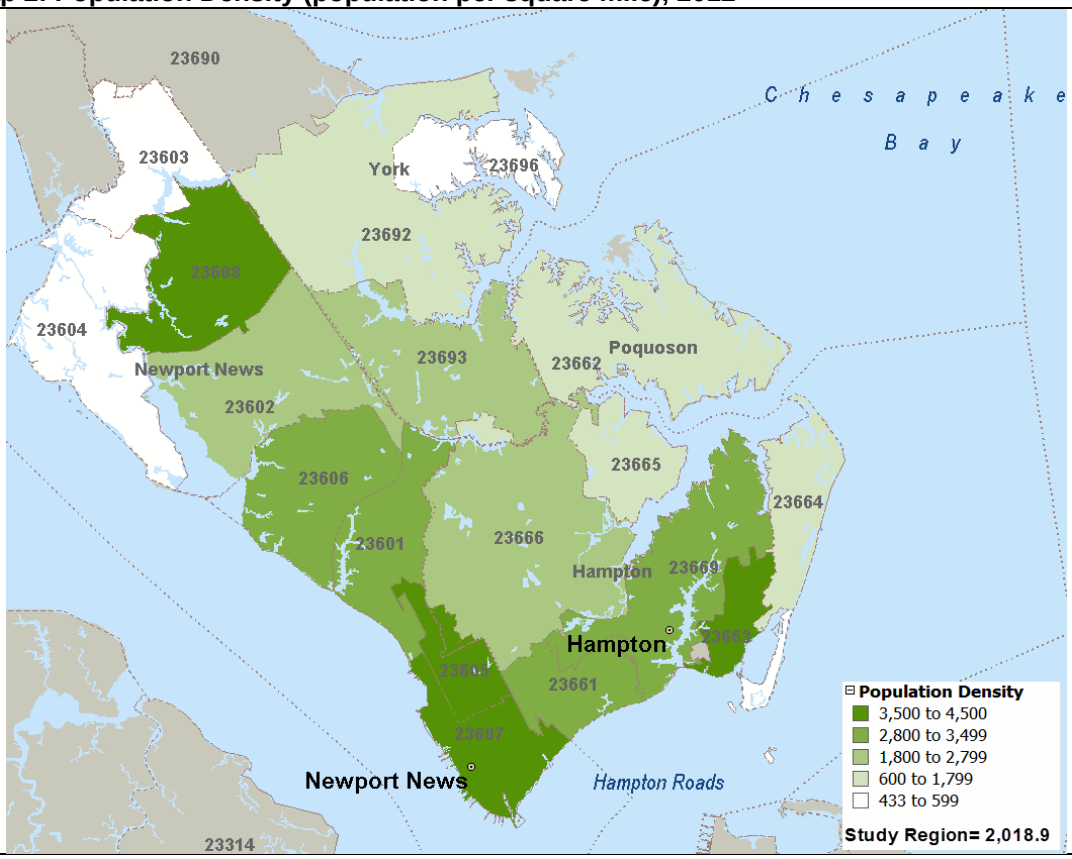
3. The maps are thematically shaded to show the zip code level indicators in five groupings or 'quintiles'.

4. Zip codes with zero values are not mapped.

Map 1: Total Population, 2012

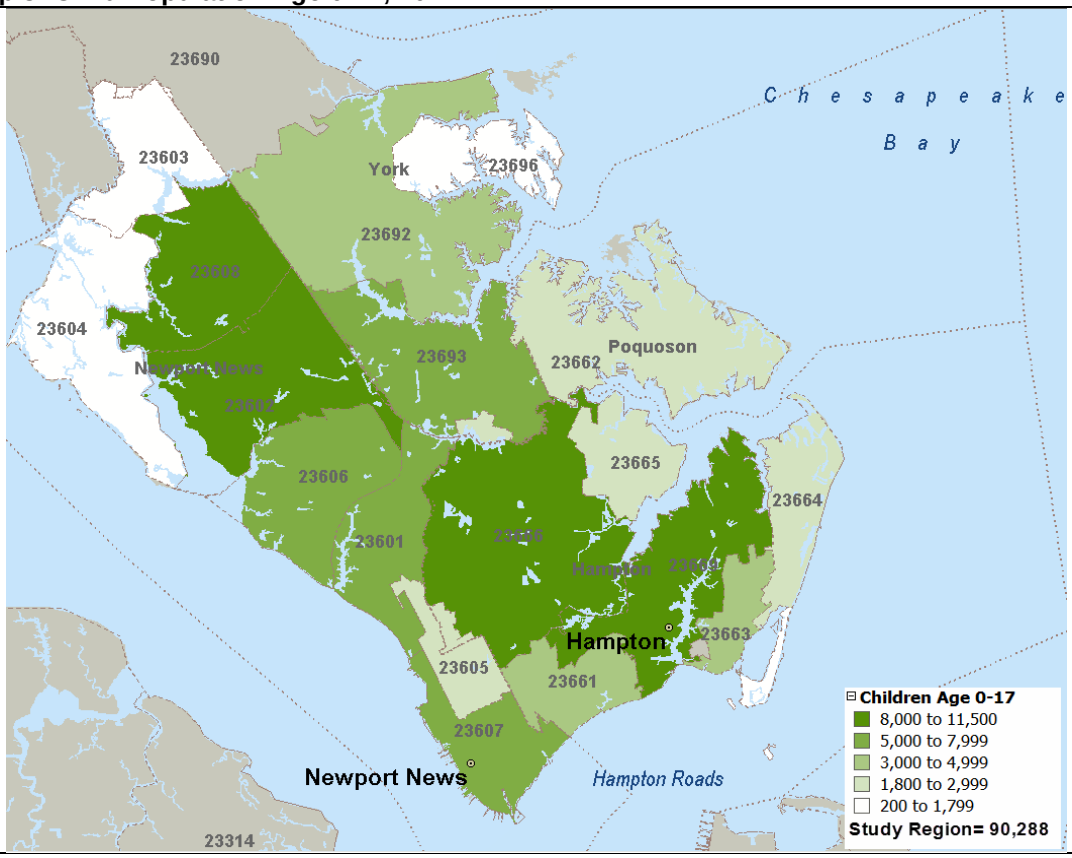


Map 2: Population Density (population per square mile), 2012

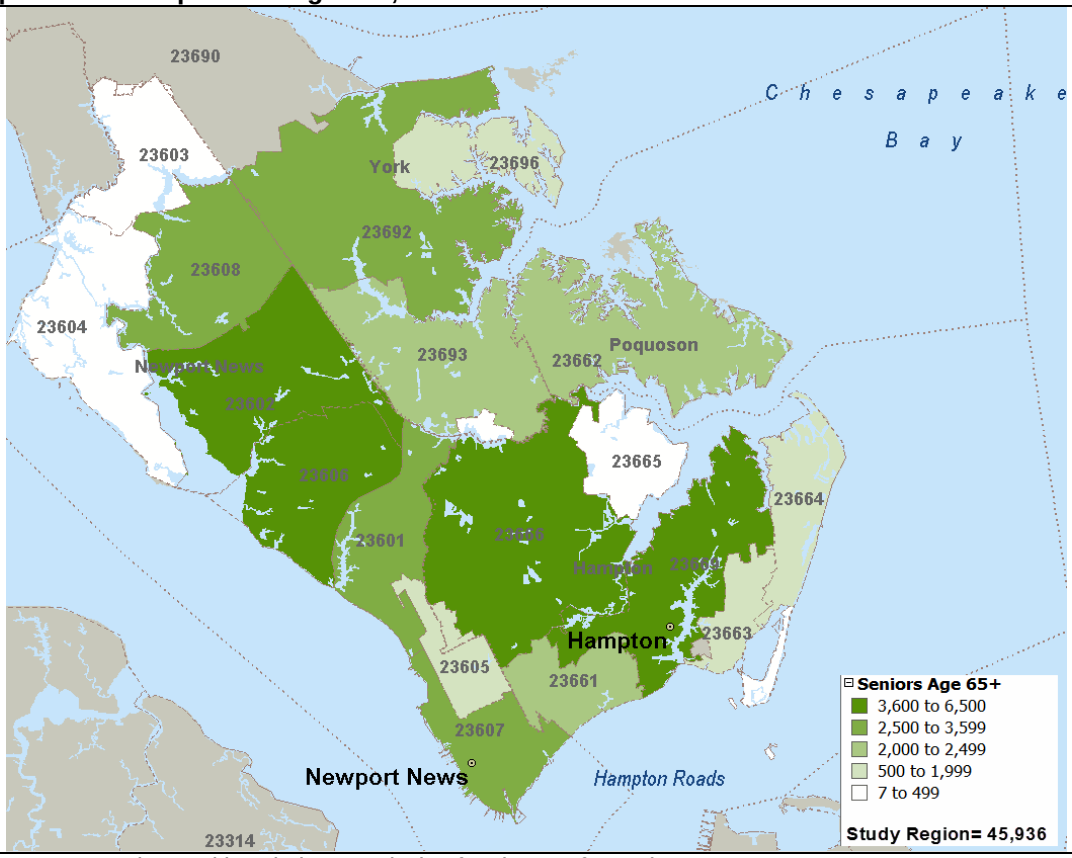


Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

Map 3: Child Population Age 0-17, 2012

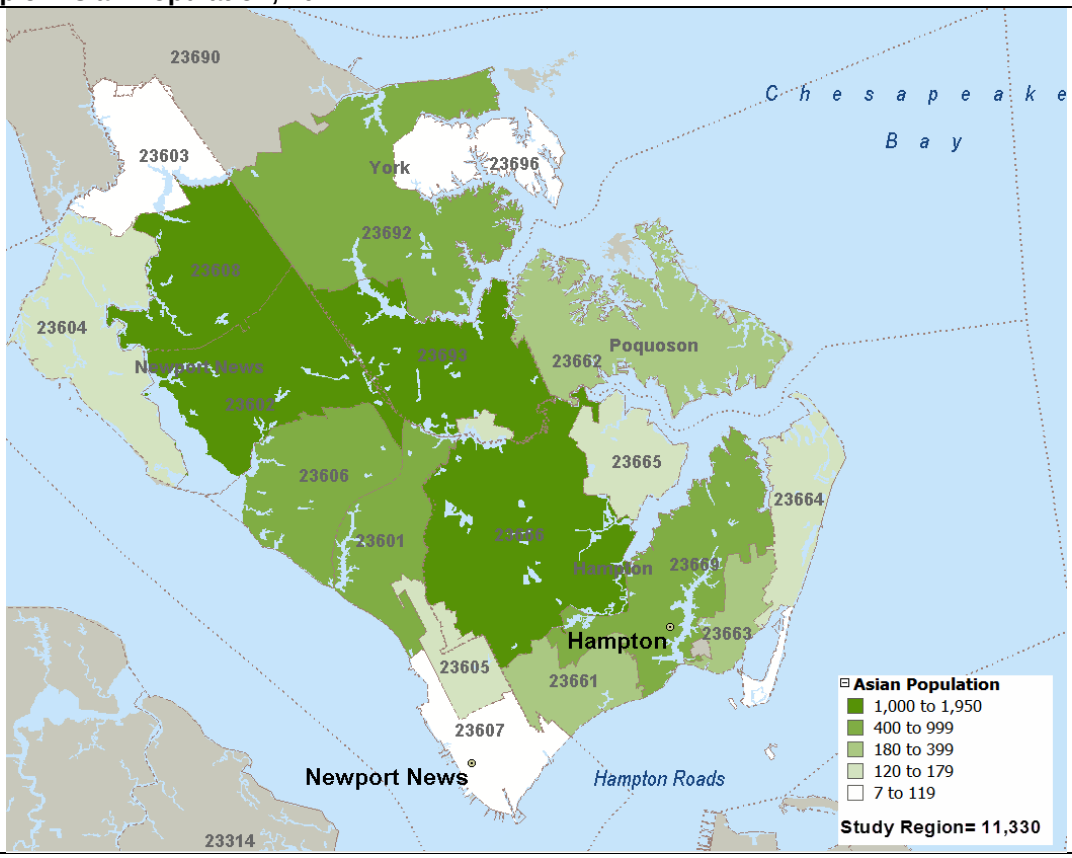


Map 4: Senior Population Age 65+, 2012

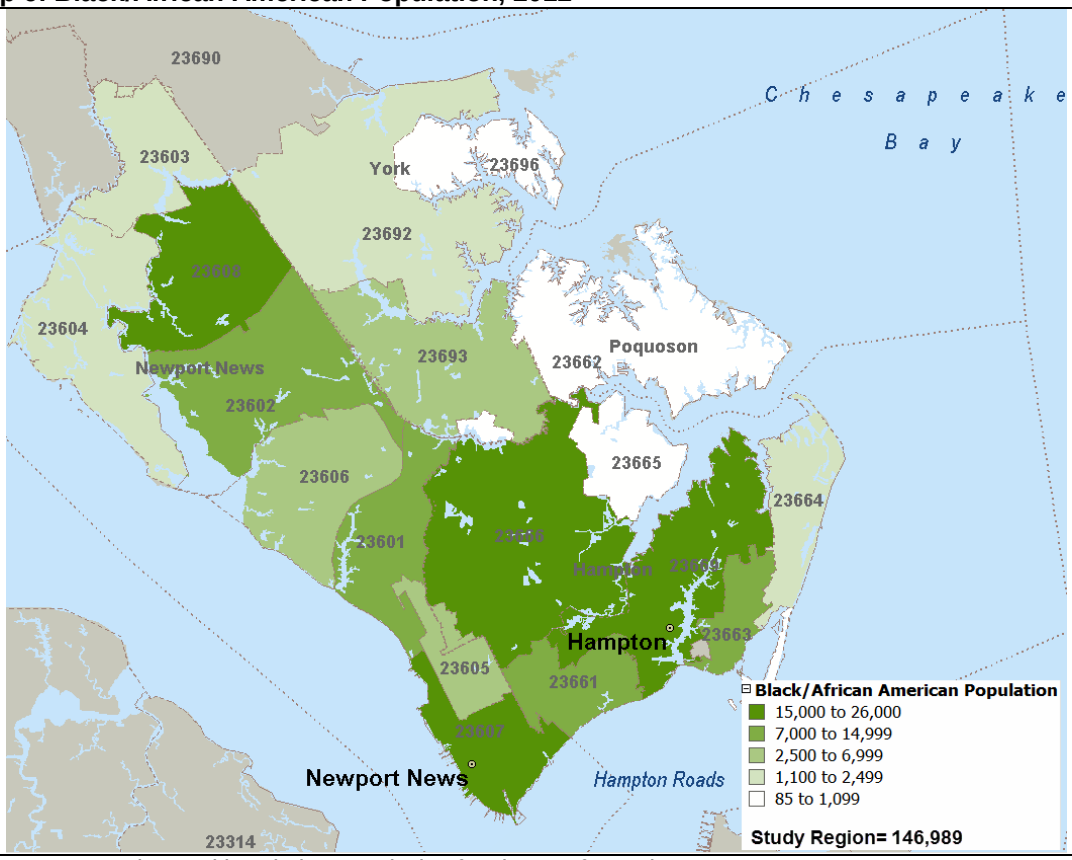


Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

Map 5: Asian Population, 2012



Map 6: Black/African American Population, 2012



Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

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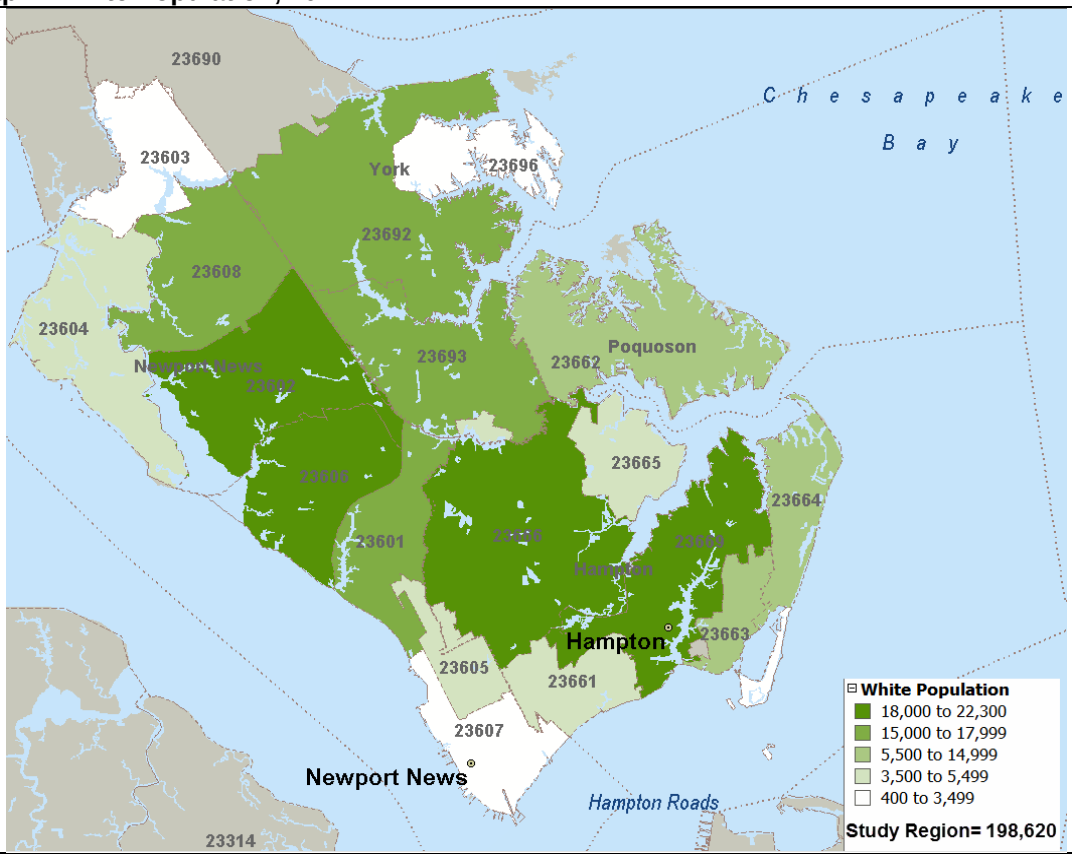
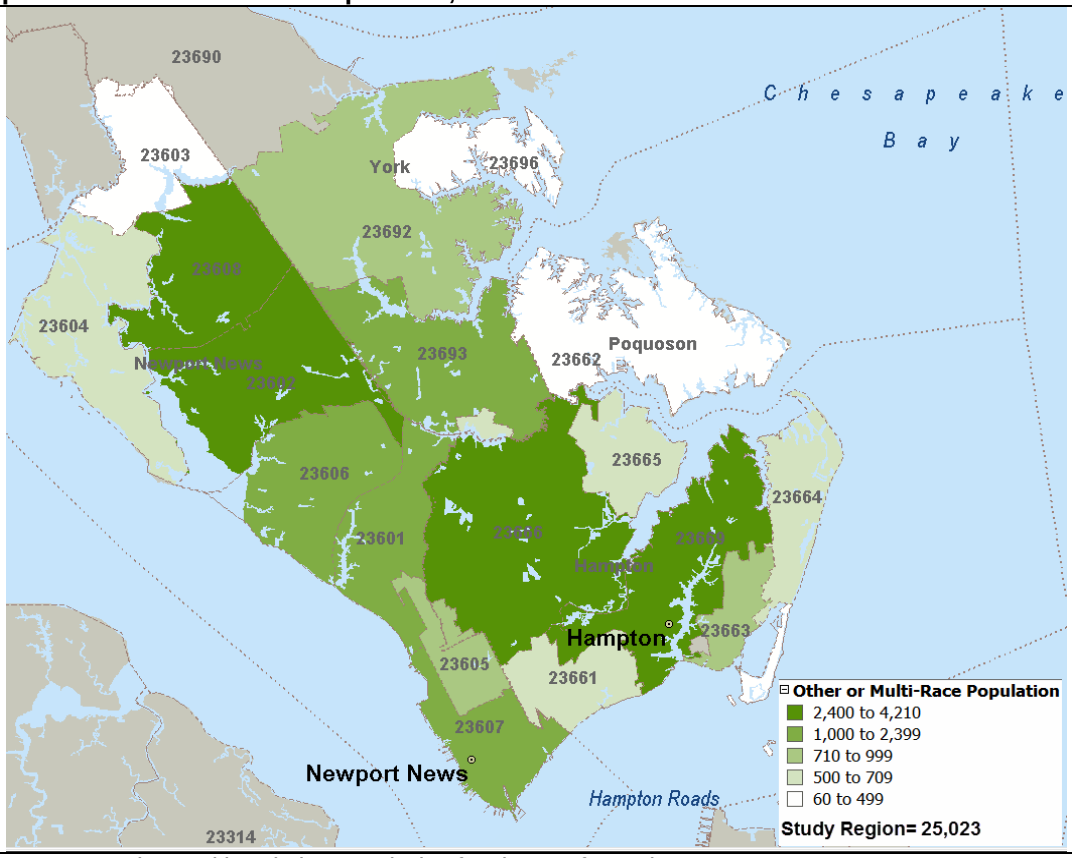
Map 7: White Population, 2012

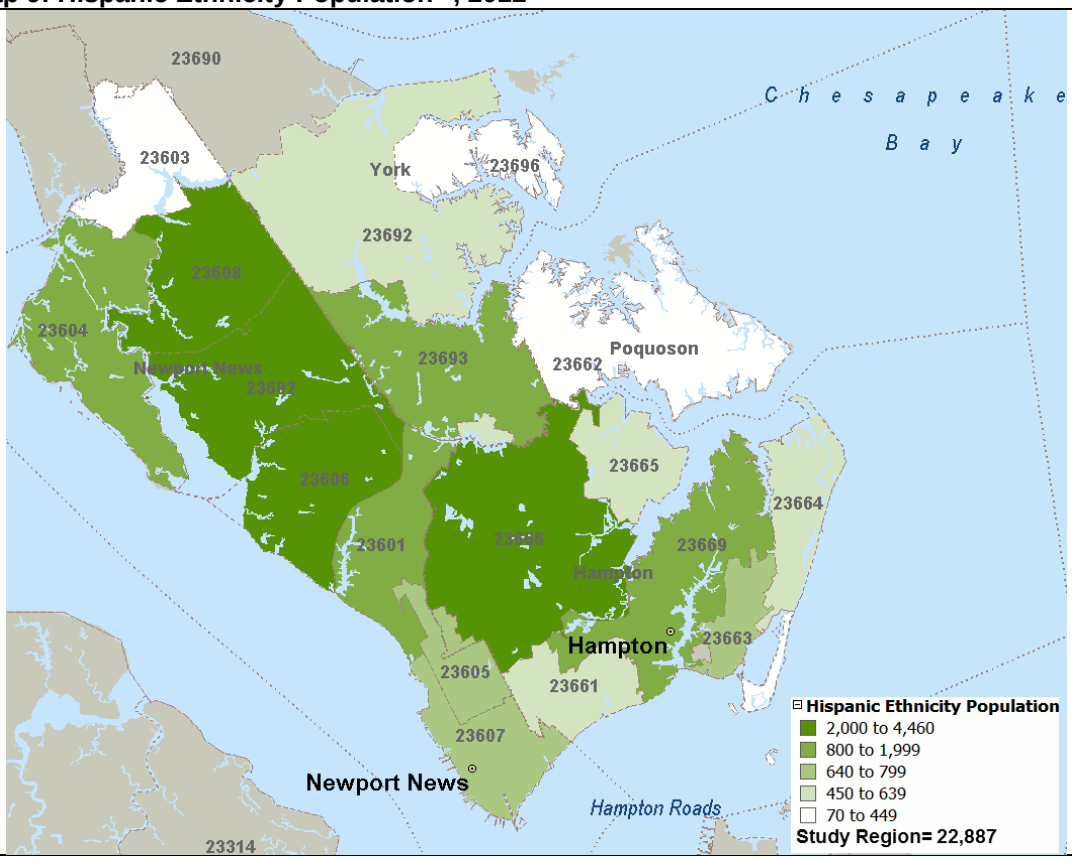


Map 8: Other or Multi-Race Population, 2012



Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

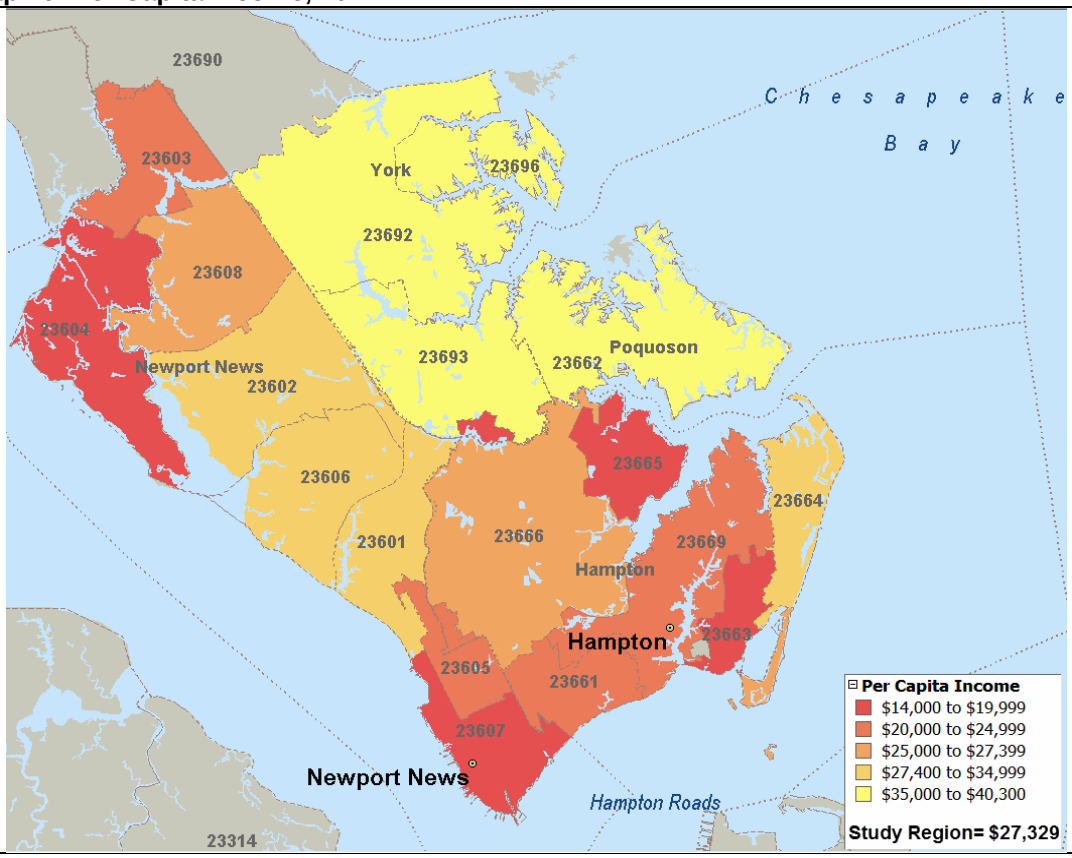
Map 9: Hispanic Ethnicity Population[18], 2012



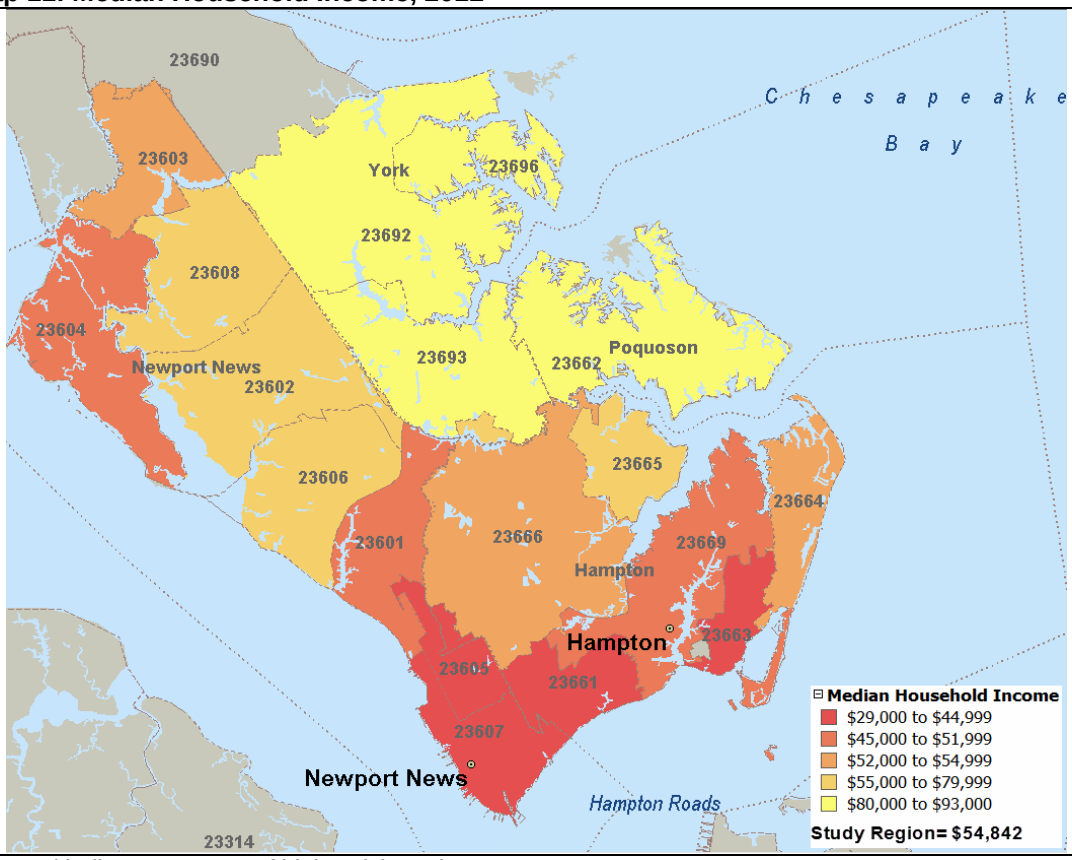
Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

[18] Classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.

Map 10: Per Capita Income, 2012

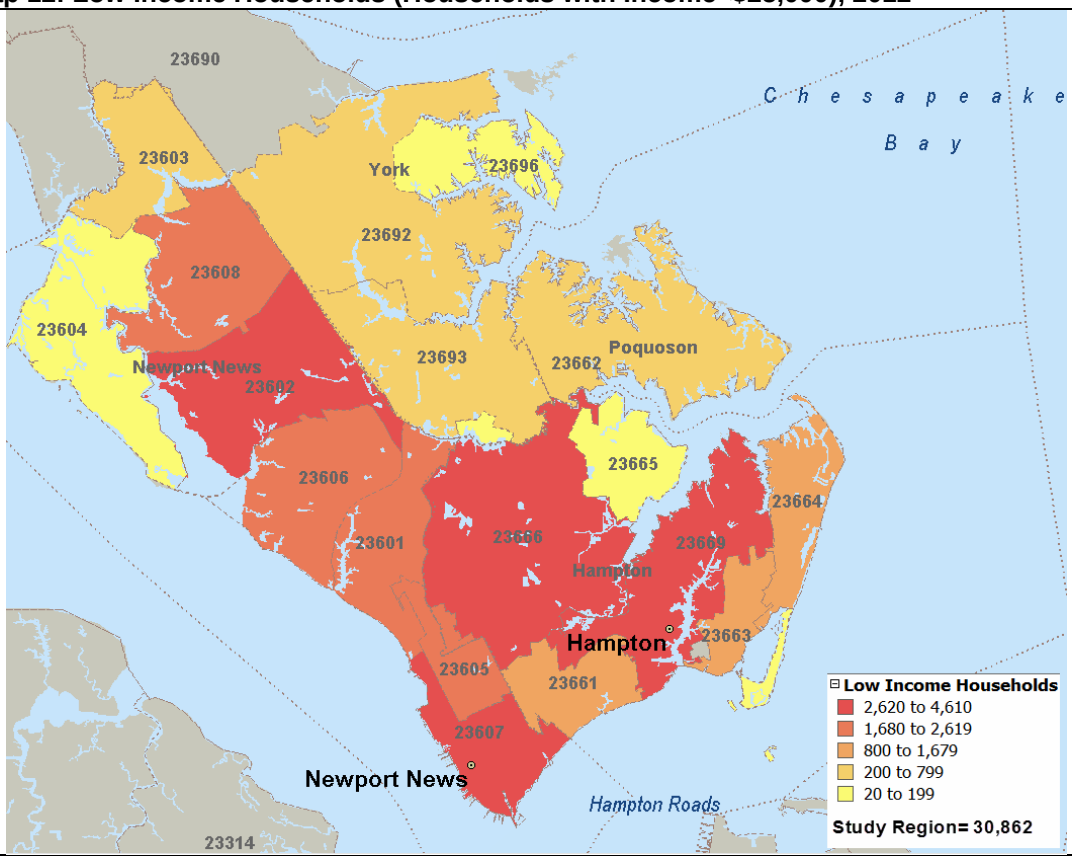


Map 11: Median Household Income, 2012

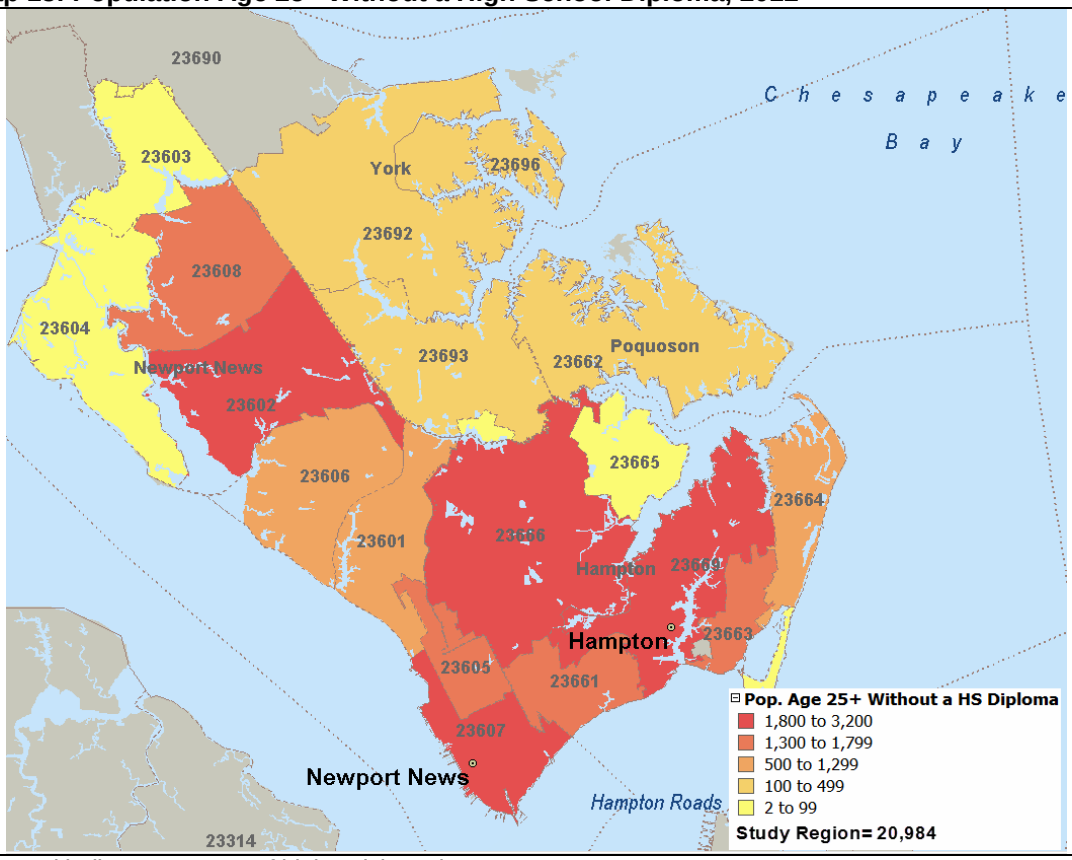


Note: Red indicates an area of higher risk on these maps.
Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

Map 12: Low Income Households (Households with Income<$25,000), 2012

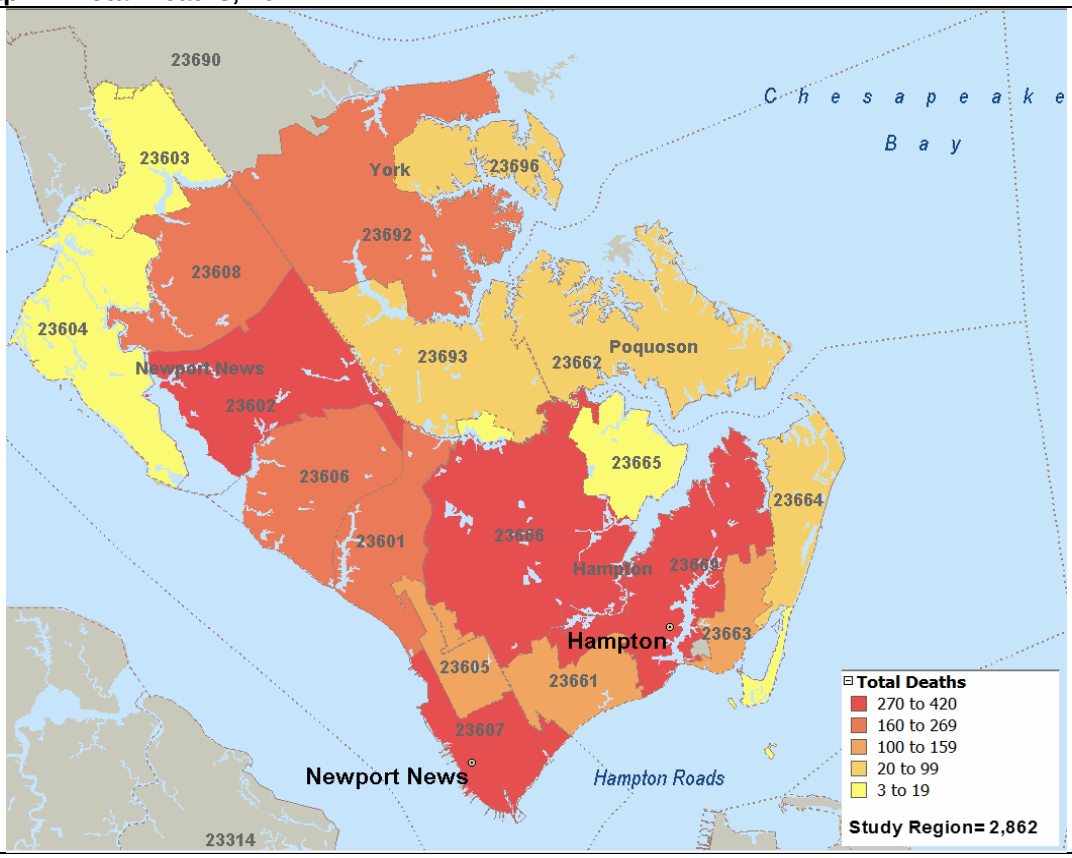


Map 13: Population Age 25+ Without a High School Diploma, 2012

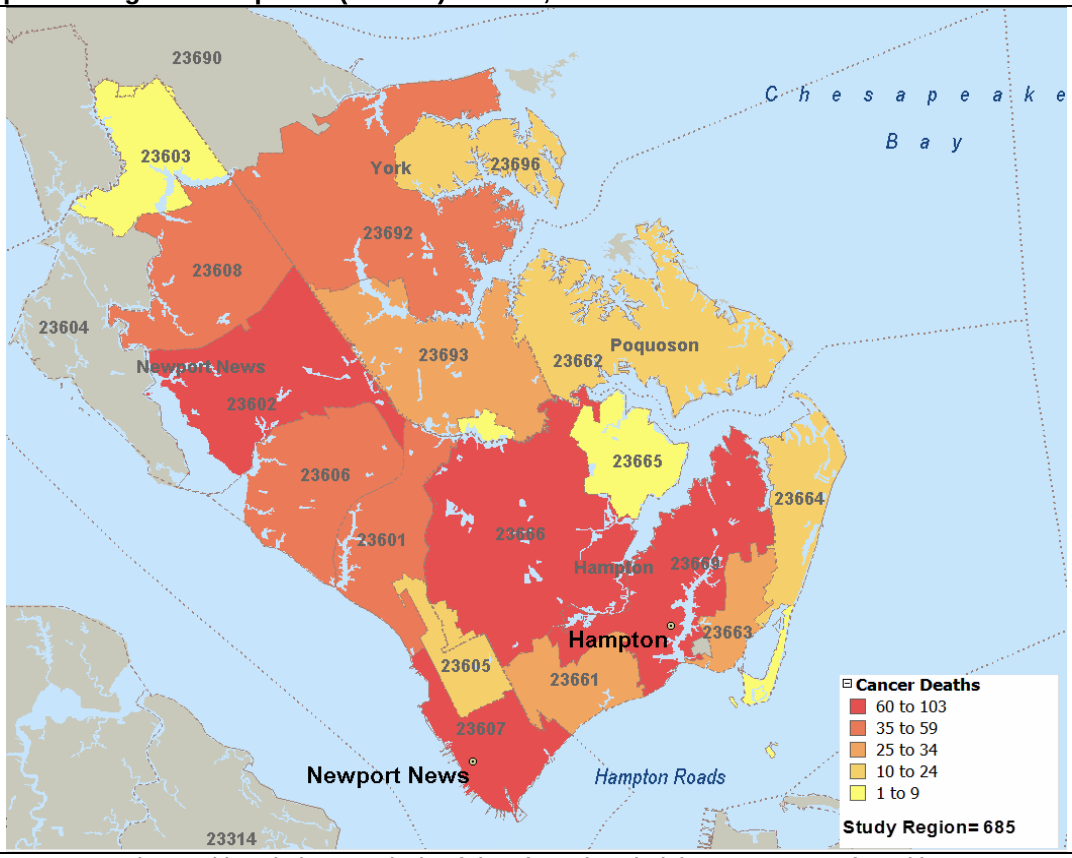


Note: Red indicates an area of higher risk on these maps.
Source: Community Health Solutions analysis of estimates from Alteryx, Inc.

Map 14: Total Deaths, 2011

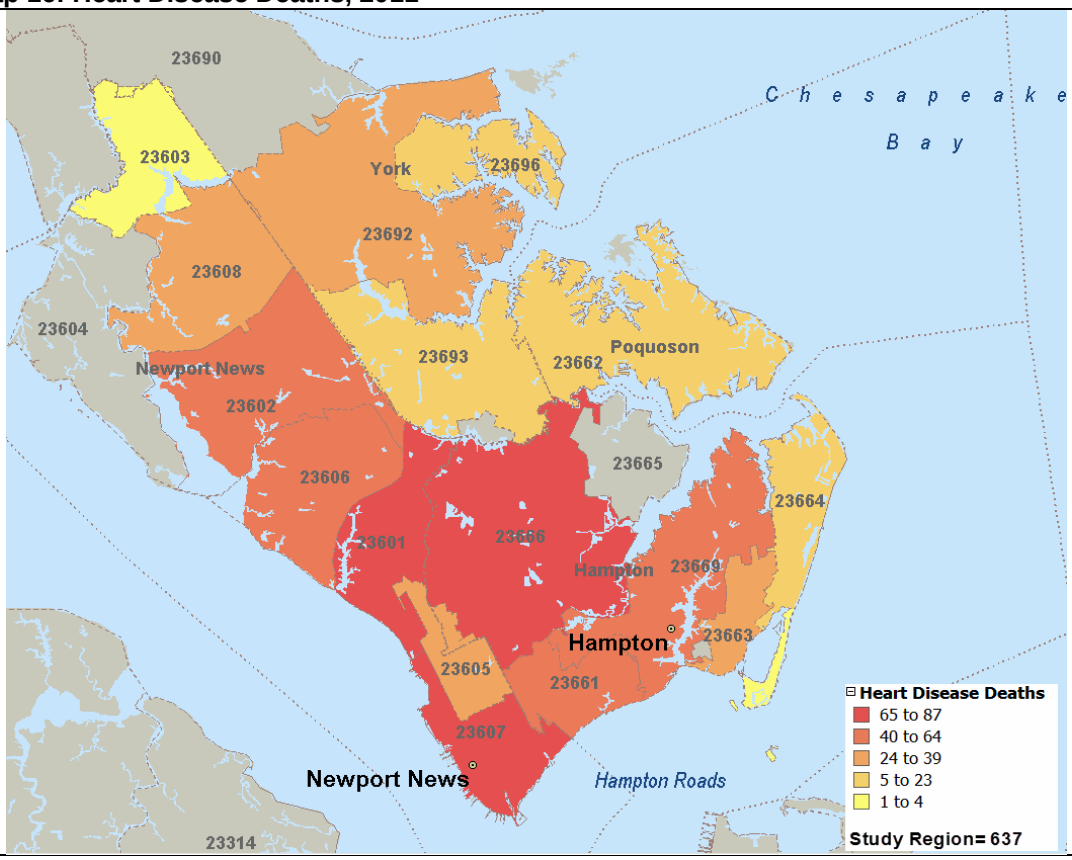


Map 15: Malignant Neoplasm (Cancer) Deaths, 2011

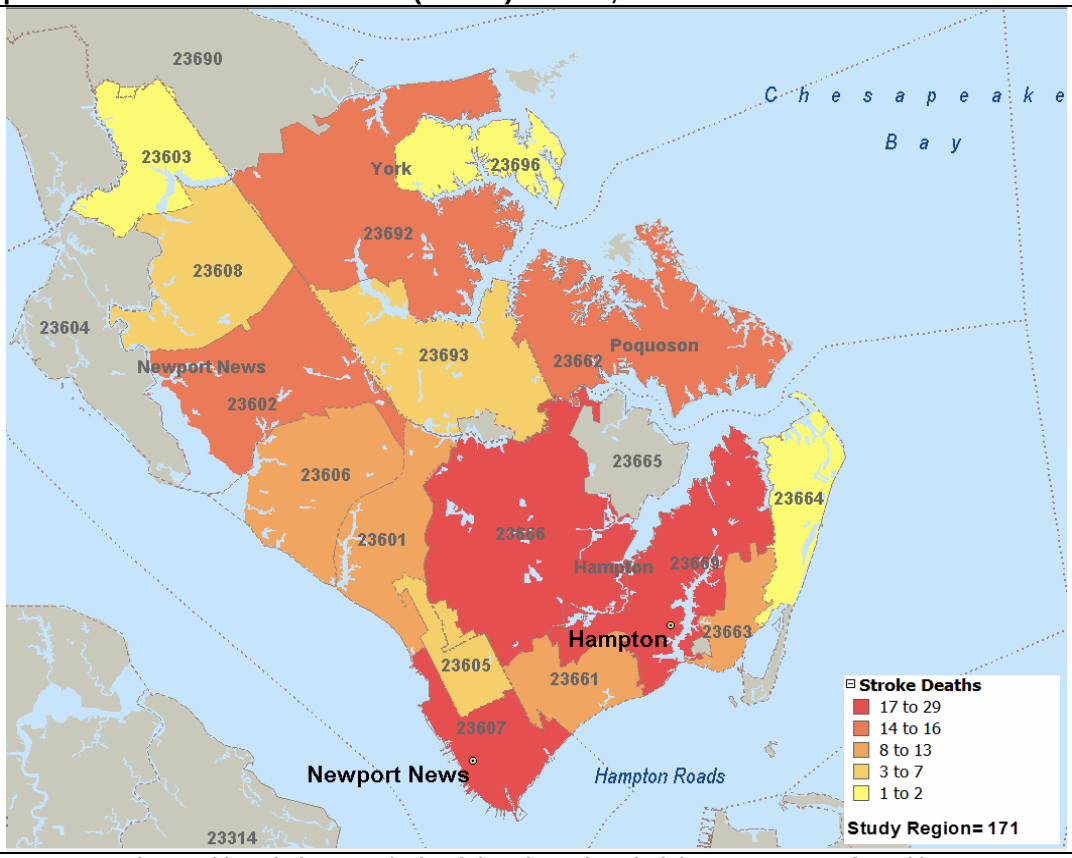


Source: Community Health Solutions analysis of data from the Virginia Department of Health.

Map 16: Heart Disease Deaths, 2011

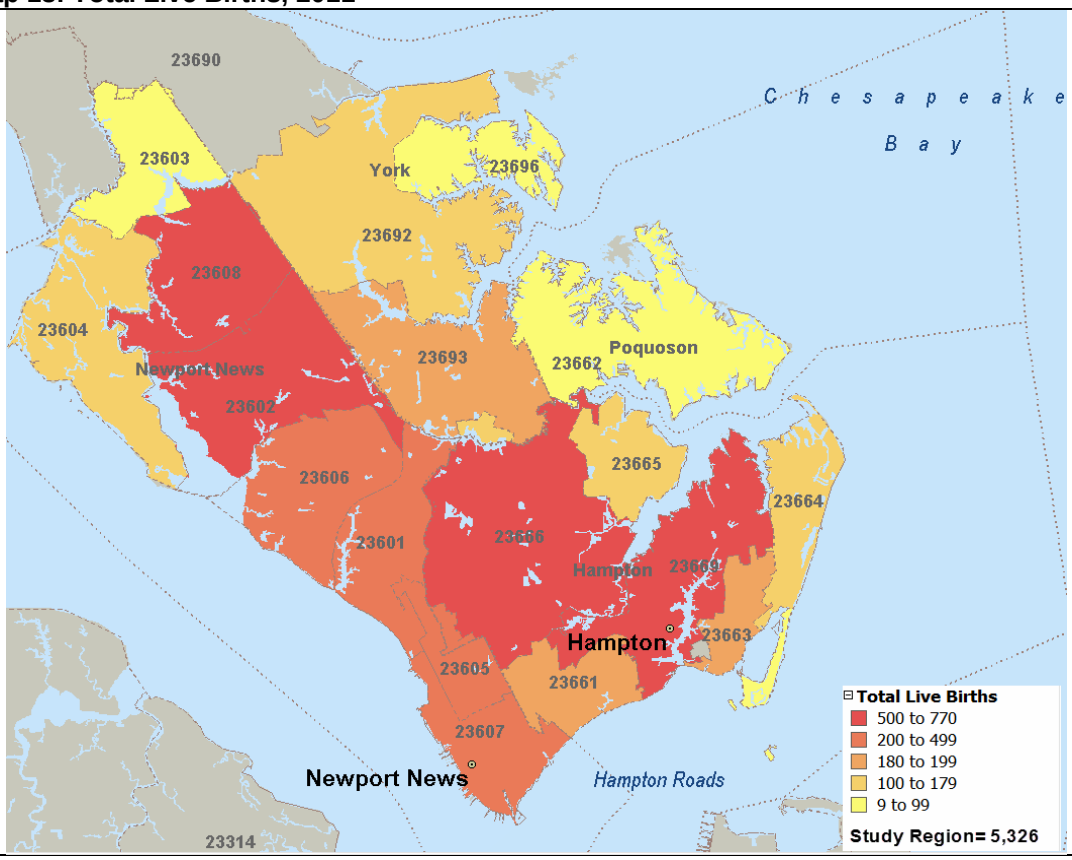


Map 17: Cerebrovascular Diseases (Stroke) Deaths, 2011

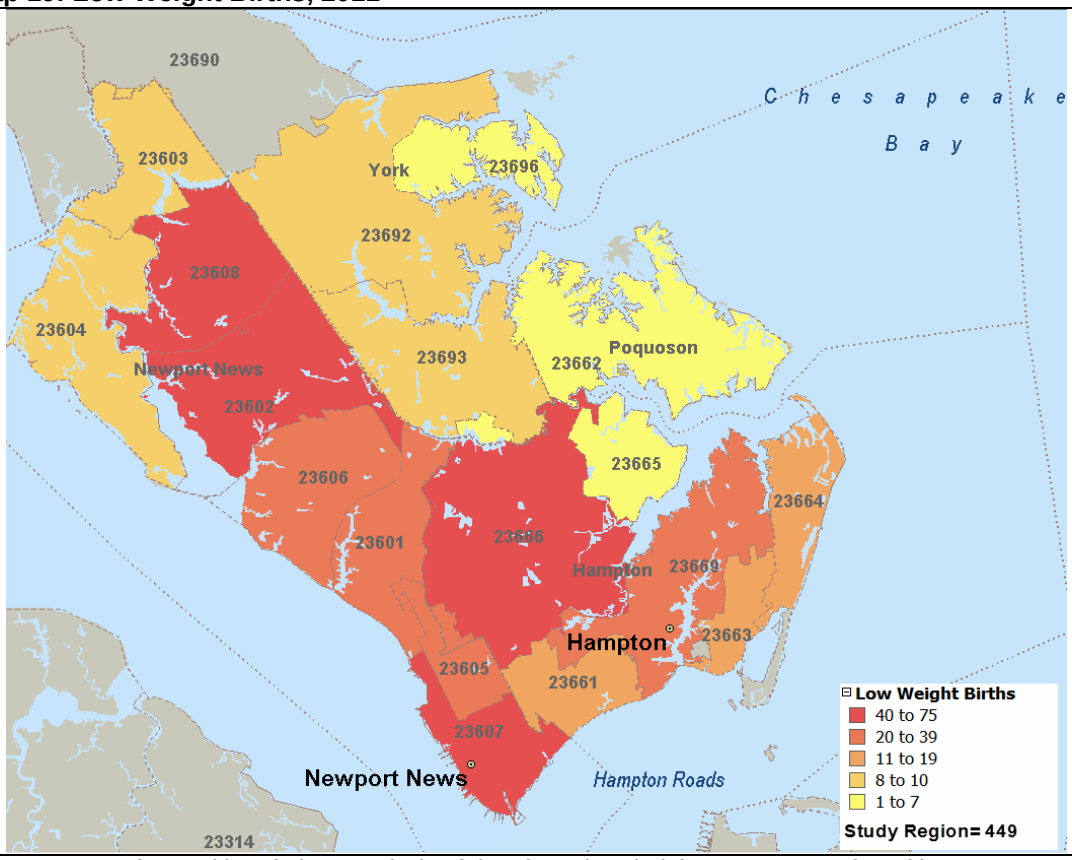


Source: Community Health Solutions analysis of data from the Virginia Department of Health.

Map 18: Total Live Births, 2011

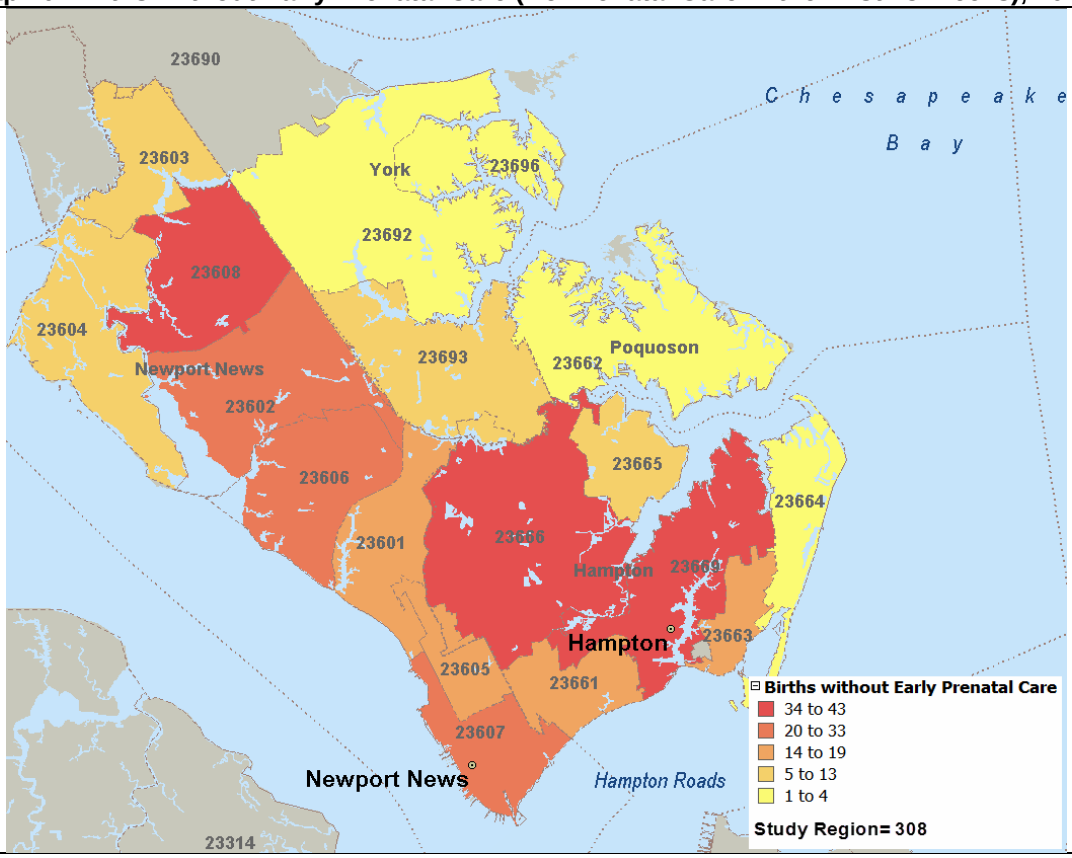


Map 19: Low Weight Births, 2011

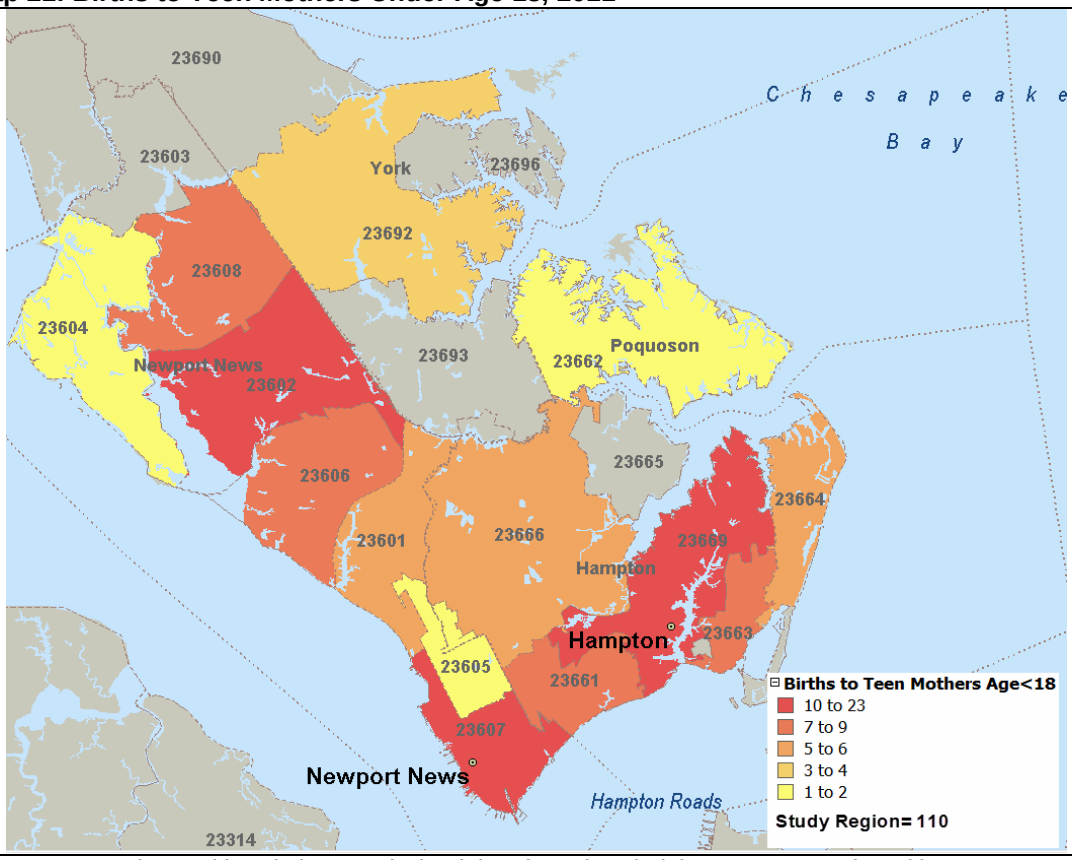


Source: Community Health Solutions analysis of data from the Virginia Department of Health.

Map 20: Births Without Early Prenatal Care (No Prenatal Care in the First 13 Weeks), 2011

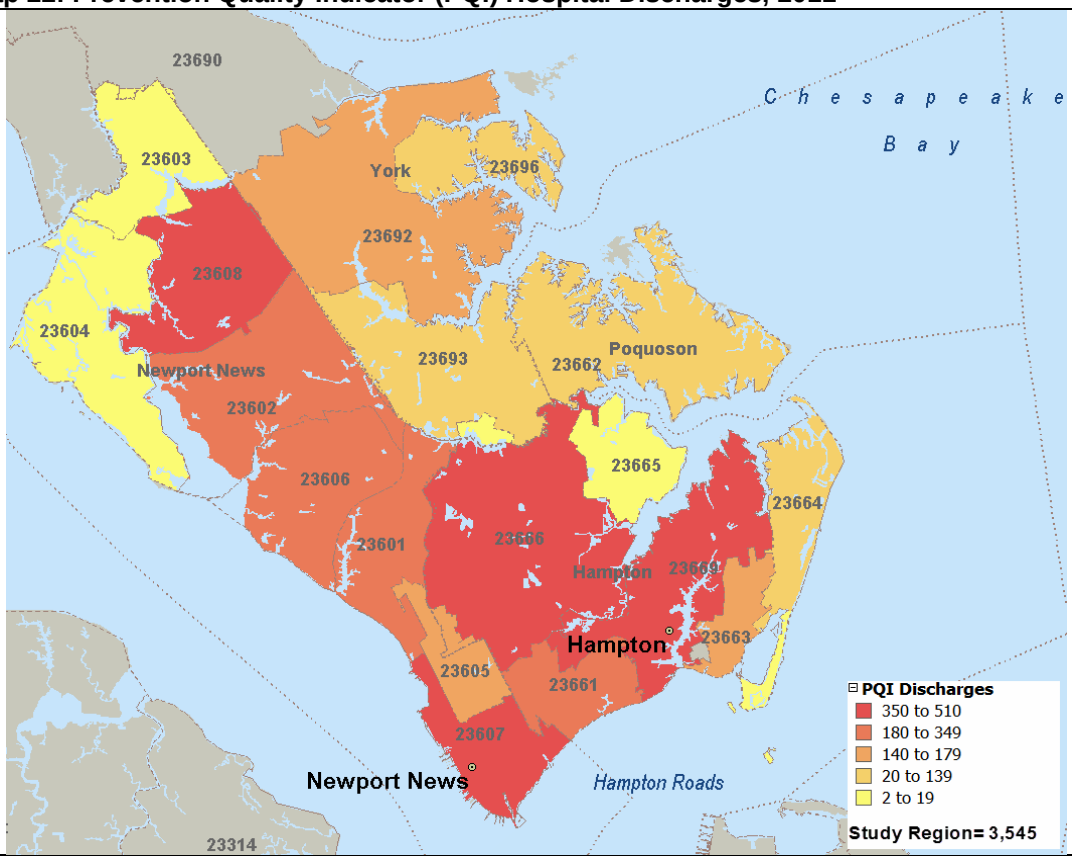


Map 21: Births to Teen Mothers Under Age 18, 2011

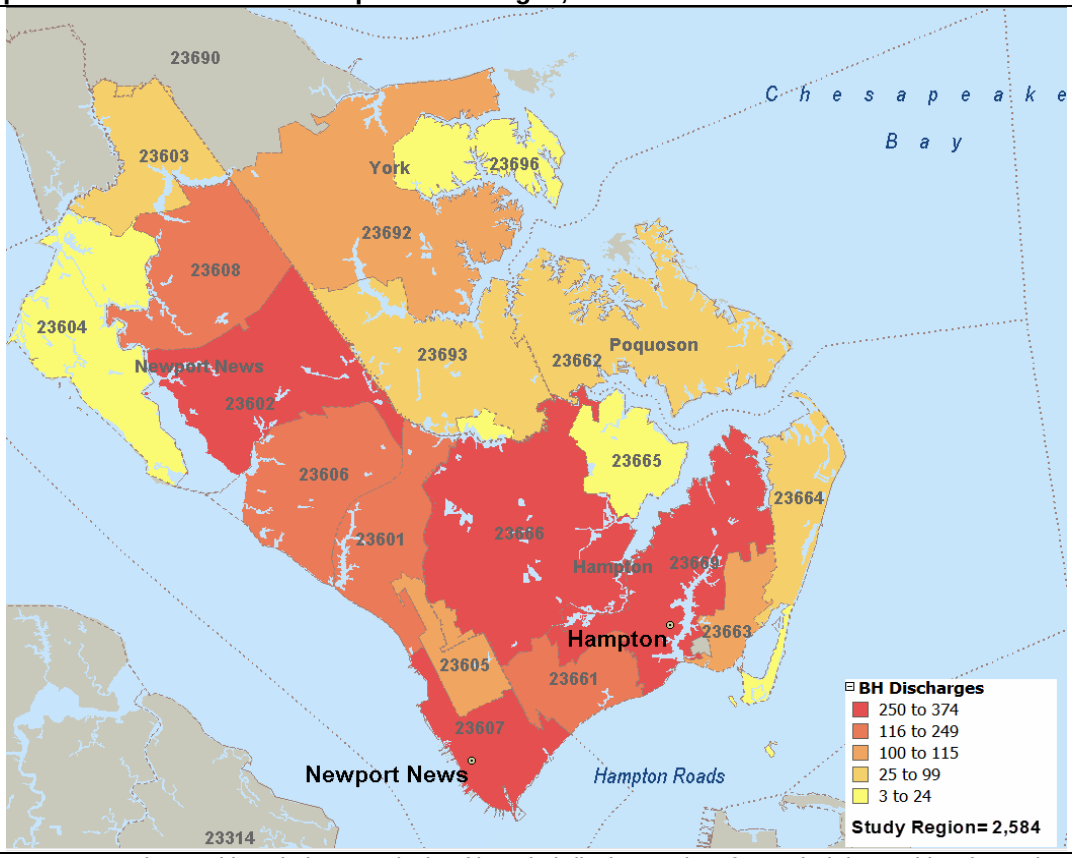


Source: Community Health Solutions analysis of data from the Virginia Department of Health.

Map 22: Prevention Quality Indicator (PQI) Hospital Discharges, 2011

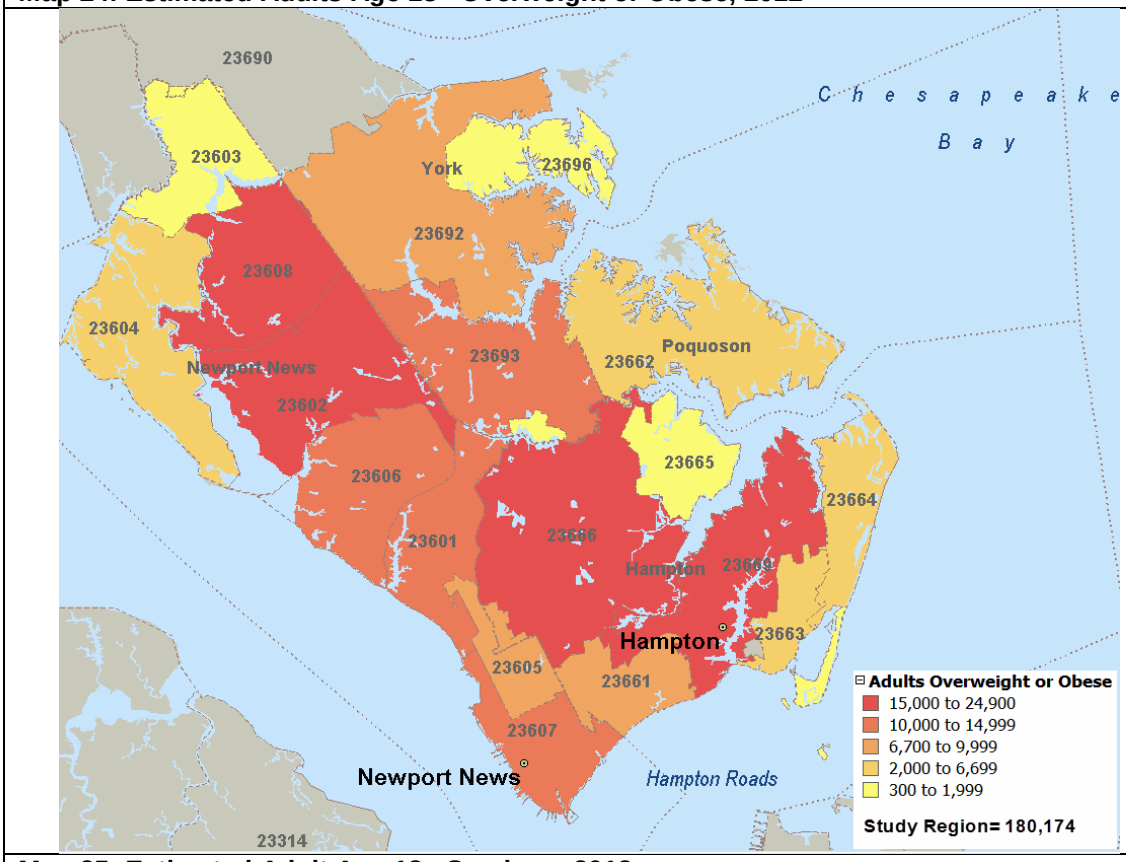


Map 23: Behavioral Health Hospital Discharges, 2011

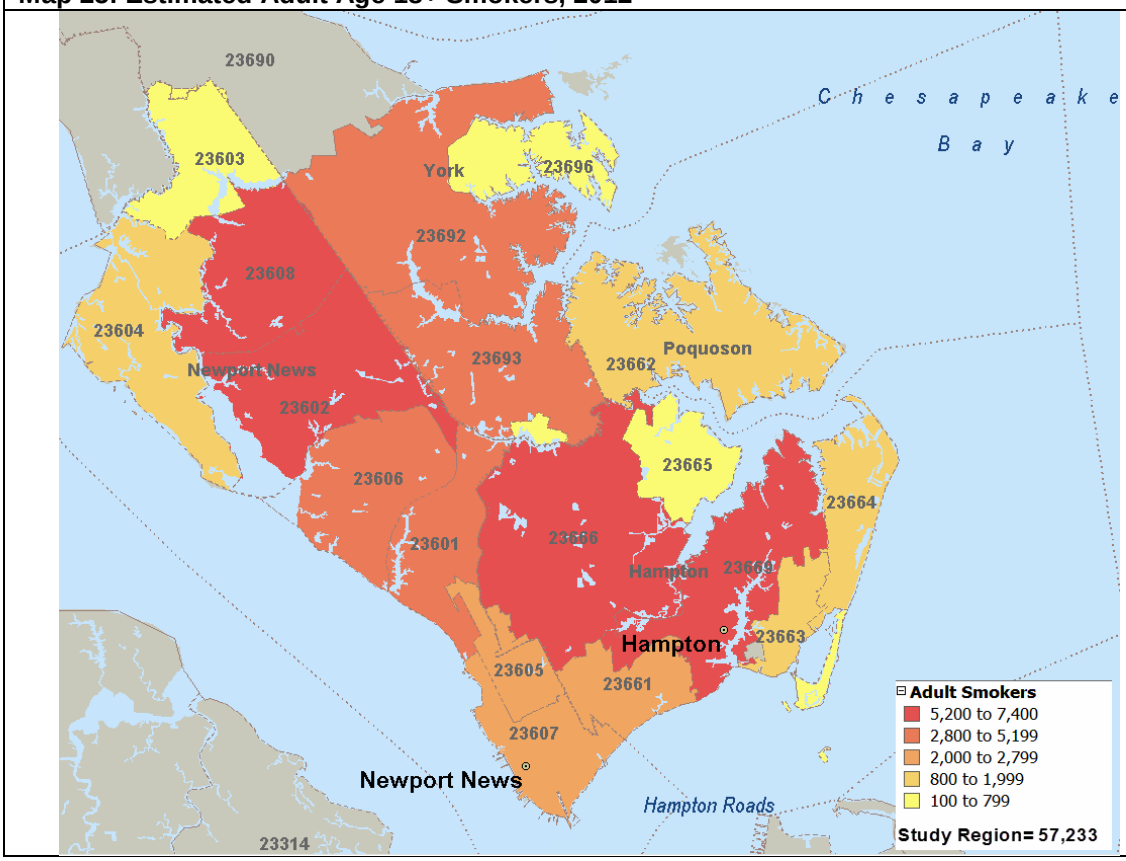


Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc.

Map 24: Estimated Adults Age 18+ Overweight or Obese, 2012

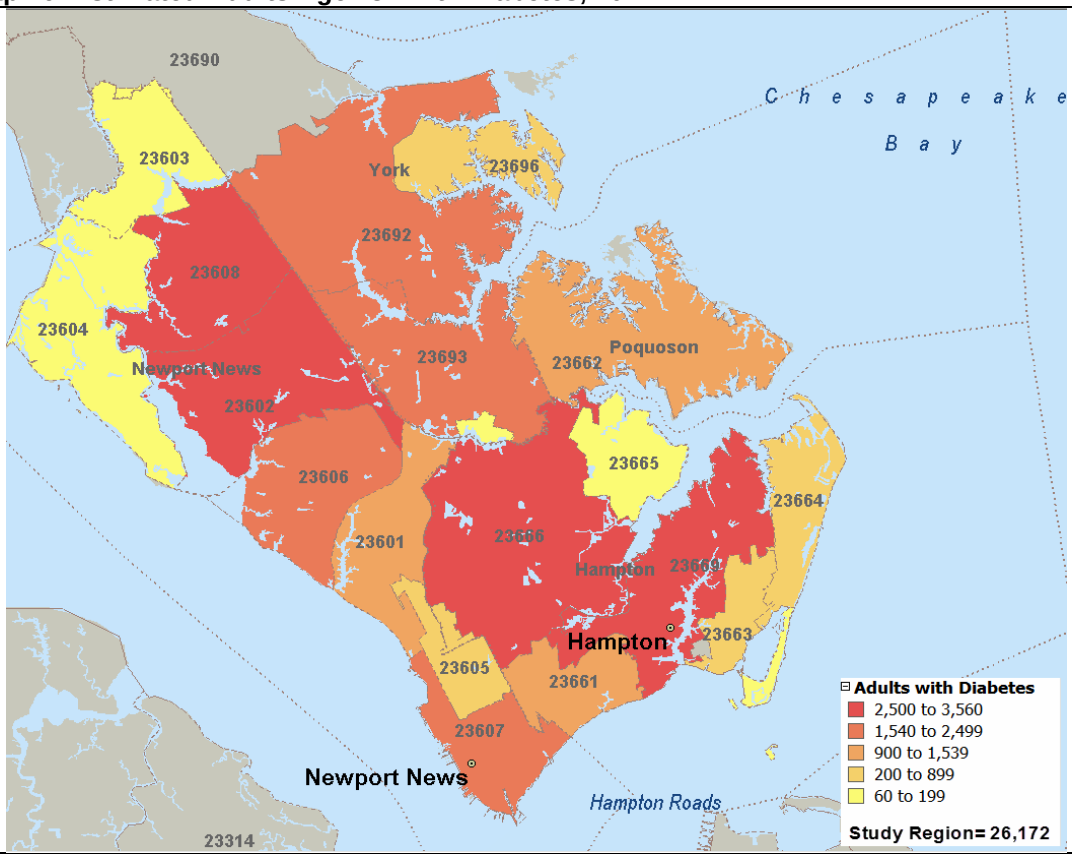


Map 25: Estimated Adult Age 18+ Smokers, 2012

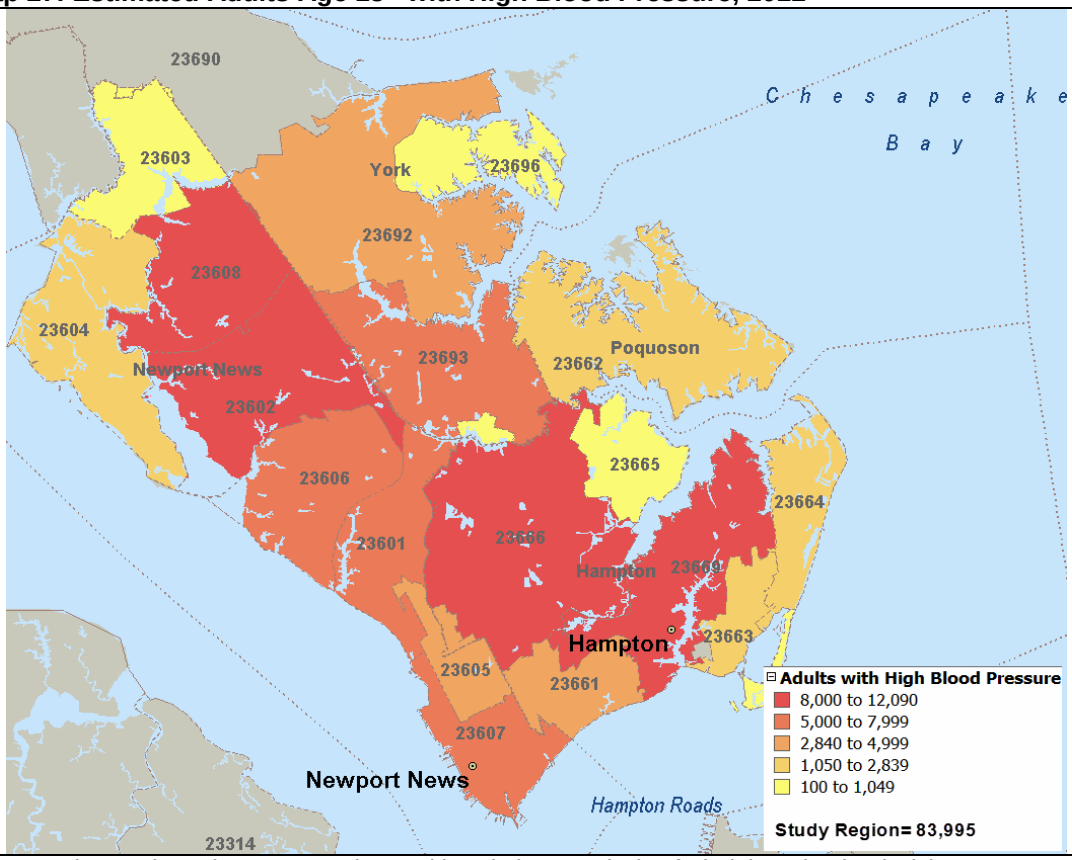


Source: Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc.

Map 26: Estimated Adults Age 18+ with Diabetes, 2012

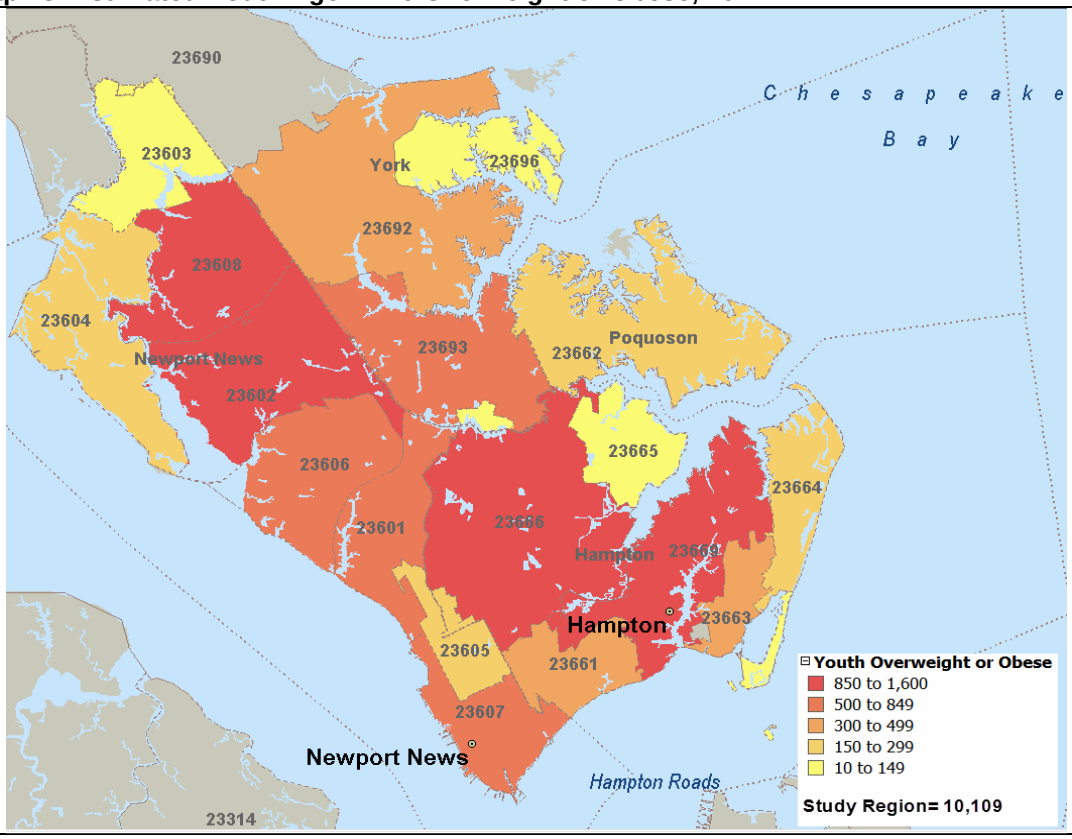


Map 27: Estimated Adults Age 18+ with High Blood Pressure, 2012

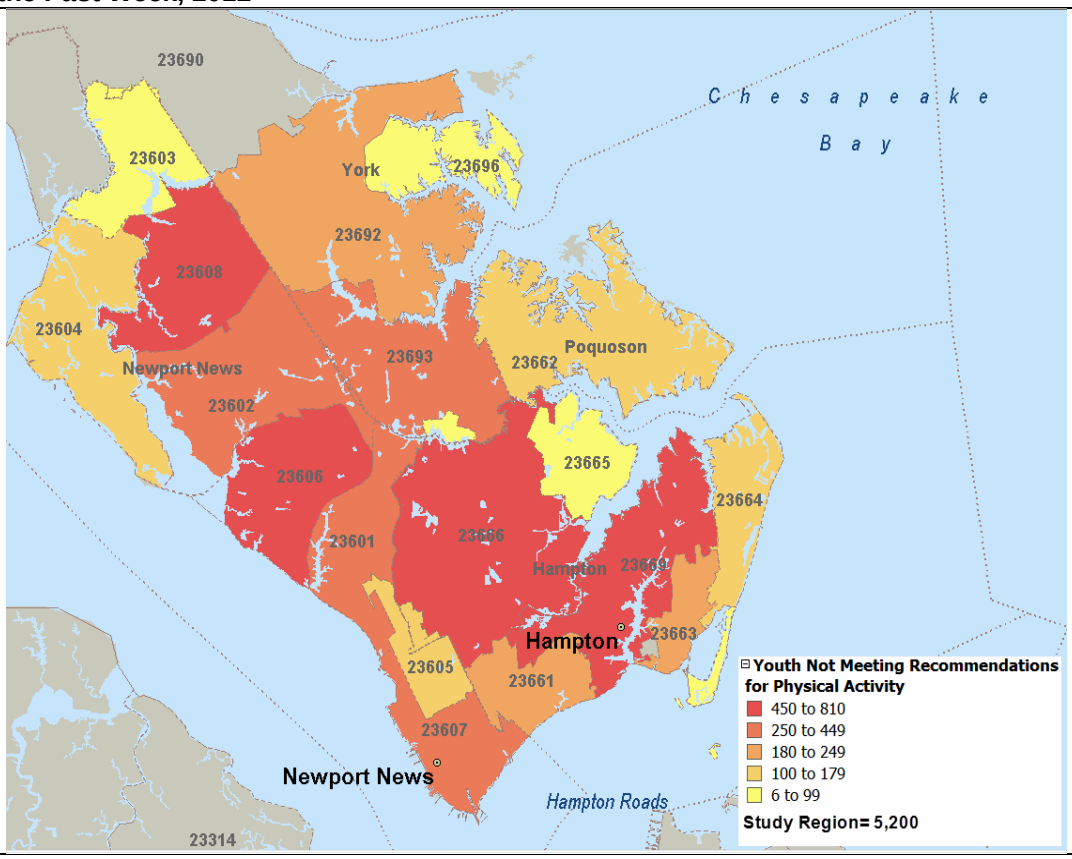


Source: Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc.

Map 28: Estimated Youth Age 14-19 Overweight or Obese, 2012

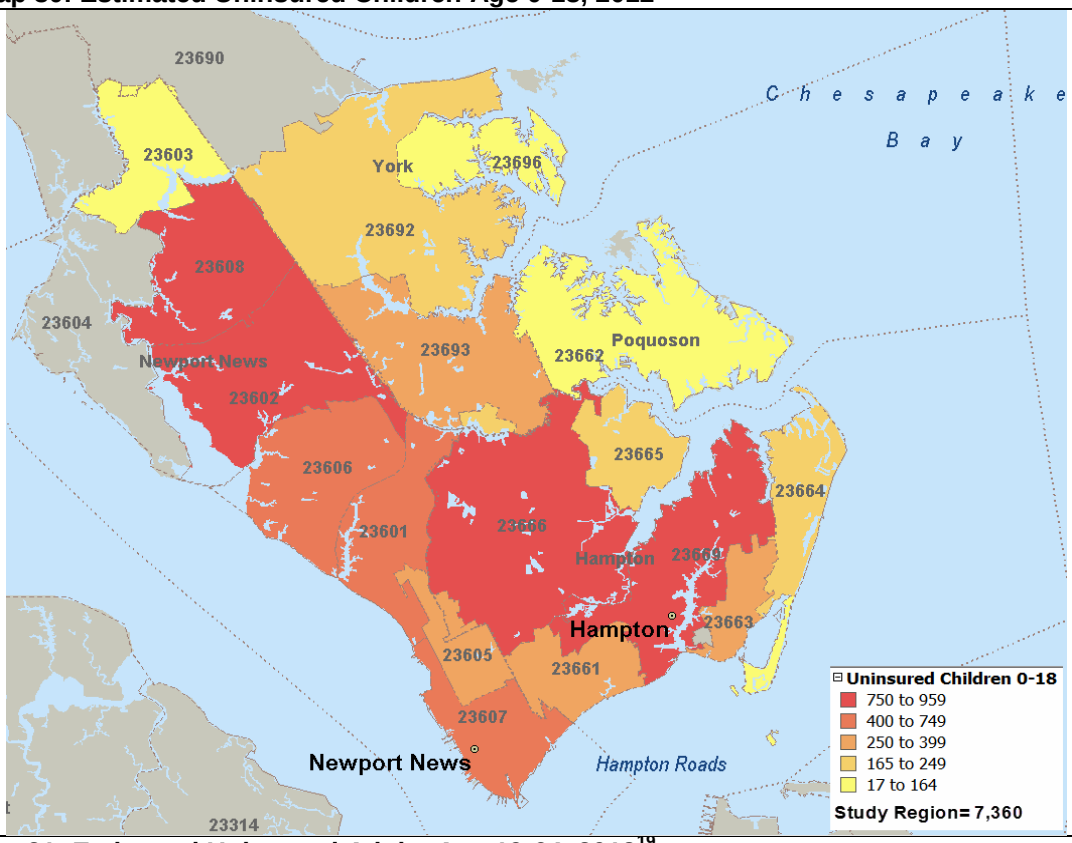


Map 29: Estimated Youth Age 14-19 Not Meeting Recommendations for Physical Activity in the Past Week, 2012

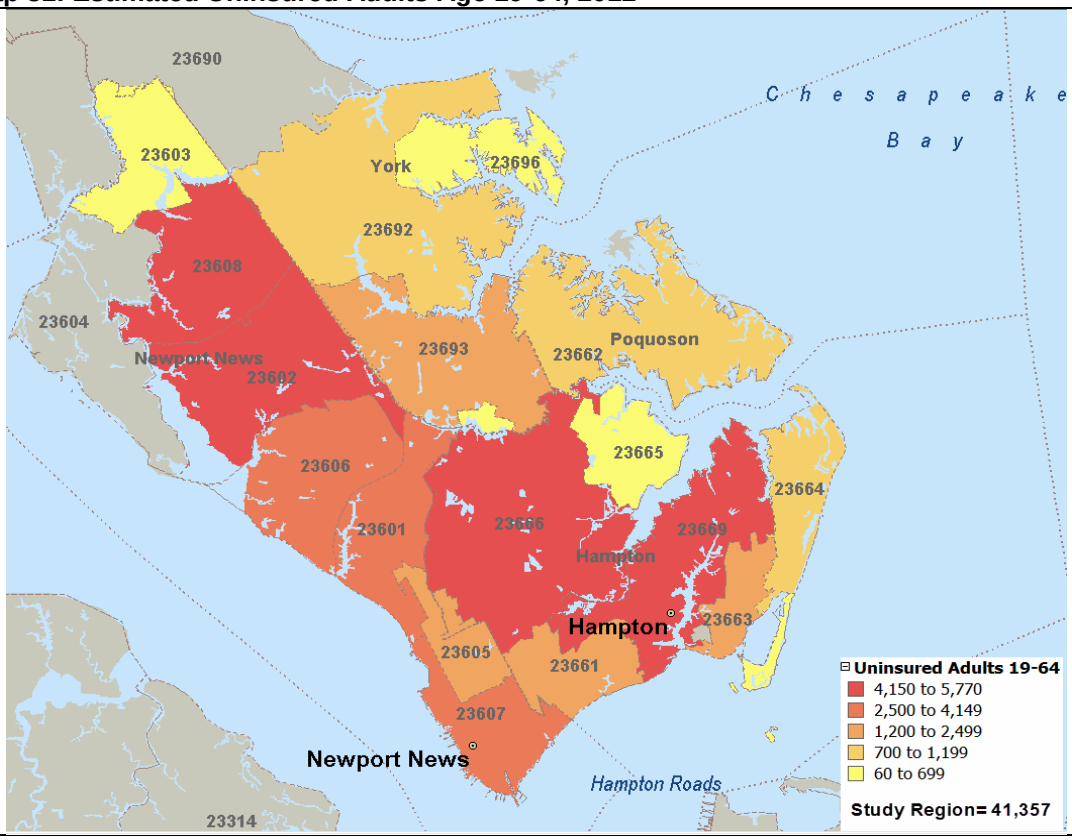


Source: Estimates based on Community Health Solutions analysis of Virginia Youth Risk Behavioral Surveillance System data and estimates from Alteryx, Inc.

Map 30: Estimated Uninsured Children Age 0-18, 2012[19]



Map 31: Estimated Uninsured Adults Age 19-64, 2012[19]



Source: Community Health Solutions estimates based on Community Health Solutions analysis of Profile of the Uninsured report produced for Virginia Health Care Foundation by the Urban Institute and estimates from Alteryx, Inc.

[19] One zip code in the study region was removed from the uninsured analysis because its population was largely military.

APPENDIX B: Community Insight Profile-Additional Ideas and Suggestions for Improving Community Health

Survey respondents were given the option to submit additional ideas and suggestions for improving community health. The open-ended responses are listed below.

Additional Ideas and Suggestions for Improving Community Health	
Response	
1	Continue to work tirelessly on customer service.
2	Develop a stronger outreach plan and let people become aware of the services you offer. Good luck!
3	Develop availability for discharged patients to maintain and obtain medications post discharge [for those] who are otherwise unable to afford [their medications, in order] to prevent readmission to inpatient hospitals.
4	Get more involved with research or community organizations to show that you are working to improve health everyday by making it visible.
5	Hampton has no child birth centers; this was a big loss when the CarePlex closed theirs.
6	I think Sentara does a superb job of getting out into the community through education and outreach activities.
7	It would seem to be mutually beneficial if the [local free clinic] could help keep patients out of your emergency rooms, and you could pass on some of this savings to [local free clinic] to support this ministry. Because of a large volunteer base, [local free clinic] is able to offer about $7 of care for every $1 contributed. I hope we can partner with you in the future to help make the Peninsula a healthier place! [name of local free clinic-affiliated community member]
8	More collaborative efforts with other healthcare providers to promote early detection for cancer.
9	1. More Patient Advocates, particularly for seniors and those who have limited abilities. 2. Coordination between hospitals patient data base and information.
10	Position Sentara to be a leader of the ACA. Capture the market by providing healthcare for the uninsured and underinsured. Provide options to the state and feds to assure that Sentara remains financially profitable while still meeting the intent of the ACA. Select a few key critical healthcare issues (child healthcare) affected by ACA. This one has a long term benefit to society.
11	Serving as a leader in patient self-management education, empowering patients
12	1. The Peninsula (and all of Hampton Roads) needs an accessible women's specialty clinic for prenatal and postpartum behavioral health and substance use disorder intervention and treatment. 2. Secondly, Medicaid eligibility expansion to the PPACA stated expectations is the single best first step to accessible health care for clients/patients of the CSB.
13	1. There is a great fitness facility across the street from the hospital. Your doctors should encourage any "at risk" patient to go over and at least have a tour. 2. Sentara Center for Health and Fitness has programs specifically for people that are referred by doctors. They even reduce their prices for those people.
14	You do a great job.

APPENDIX C: Data Sources

Section	Source
Part I:Community Insight Profile	
1) Survey Respondents 2) Community Health Concerns 3) Community Service Gaps 4) APPENDIX B: Community Insight Profile-Additional Ideas and Suggestions for Improving Community Health	Community Health Solutions analysis of *Community Insight* survey responses submitted by community stakeholders.
Part II: Community Indicator Profile	
1) Health Demographic Trend Profile 2) Health Demographic Snapshot Profile (also Appendix A: Maps 1-13)	Community Health Solutions analysis of US Census data and population estimates from Alteryx, Inc. (2012 and 2017). 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 and estimates from Alteryx, Inc (2011).
4) Maternal and Infant Health Profile (also Appendix A: Maps 18-21)	Community Health Solutions analysis of Virginia Department of Health birth record data and estimates from Alteryx, Inc (2011).
5) Preventable Hospitalization Profile (also Appendix A: Map 22) 6) Behavioral Health Hospitalization Profile (also Appendix A: Map 23)	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) dataset (January 1-December 31, 2011) and estimates from Alteryx, Inc. (2011). Data include discharges for Virginia residents from Virginia hospitals reporting to Virginia Health Information, Inc. These data do not include discharges from state behavioral health facilities or federal (military) facilities. Data reported are based on the patient's primary diagnosis. *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.*
7) Adult Health Risk Factor Profile (also Appendix A: Maps 24-27)	Estimates of chronic disease and risk behaviors for adults 18+ are based on Community Health Solutions analysis of: • 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 • Estimates from Alteryx, Inc. (2012) Estimates are used when there are no primary sources of data available at the local level. The statistical model to produce the estimates was developed by Community Health Solutions. The estimates are for planning purposes only and are not guaranteed for accuracy. The table does not include a comparison to Virginia statewide rates because the local estimates were derived from state-level data; therefore, attempts to contrast local estimates versus state estimates would result in a circular comparison.

8) Youth Health Risk Factor Profile (also Appendix A: Maps 28-29)	Estimates of risk behaviors for children age 14-19 are based on Community Health Solutions analysis of: • National and statewide Virginia Youth Risk Behavioral Surveillance System from the Centers for Disease Control (2011). For more information on YRBSS visit: http://www.cdc.gov/HealthyYouth/yrbs/index.htm • Estimates from Alteryx, Inc. (2012). Estimates are used when there are no primary sources of data available at the local level. The statistical model to produce the estimates was developed by Community Health Solutions. The estimates are for planning purposes only and are not guaranteed for accuracy. The table does not include a comparison to Virginia statewide rates because the local estimates were derived from state-level data; therefore, attempts to contrast local estimates versus state estimates would result in a circular comparison.
9) Uninsured Profile (also Appendix A: Maps 30-31)	Estimates of uninsured nonelderly age 0-64 are based on Community Health Solutions analysis of: • *Profile of the Uninsured* report produced for Virginia Health Care Foundation by the Urban Institute (2011) • Estimates from Alteryx, Inc. (2012) Estimates are used when there are no primary sources of data available at the local level. The statistical model to produce the estimates was developed by Community Health Solutions. The estimates are for planning purposes only and are not guaranteed for accuracy. The table does not include a comparison to Virginia statewide rates because the local estimates were derived from state-level data; therefore, attempts to contrast local estimates versus state estimates would result in a circular comparison.
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/.