Sentara Norfolk General Hospital
Community Health Needs Assessment
2013

SENTARA®

Sentara Norfolk General Hospital

Community Health Needs Assessment

Introduction

Sentara Norfolk General 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:

- Obesity/nutrition/fitness
- Behavioral health/depression/substance abuse
- Heart disease
- Cancer

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 Norfolk General Hospital

By Community Health Solutions

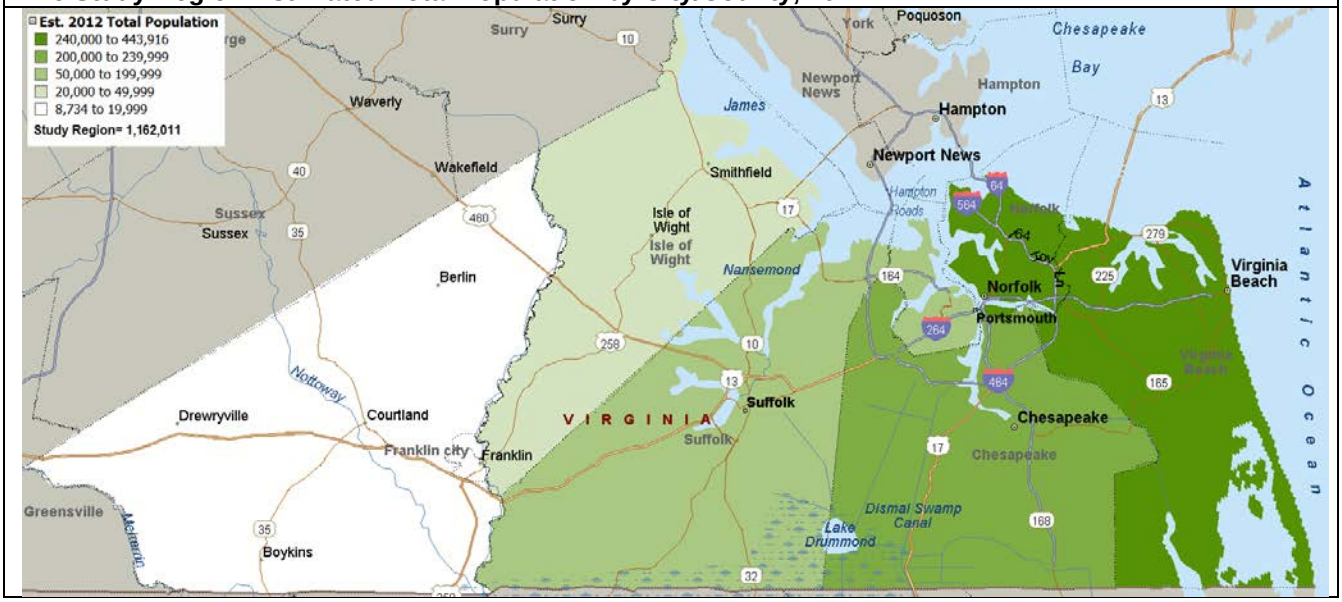
Table of Contents

Executive Summary

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

The study focuses on eight localities identified by SNGH as its study region: the cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach; and the counties of Isle of Wight and Southampton. 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-Estimated Total Population by City/County, 2012



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 SNGH. 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 community stakeholders identified by SNGH. A total of 77 stakeholders 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, depression and more.

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

Thirty-four respondents offered open-ended responses with additional ideas and suggestions for improving community health. These responses are listed in *Appendix B*.

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 1,162,011 people. The population is expected to increase to 1,192,274 by 2017. It is projected that population growth will occur in all demographic groups, including a 10% increase in seniors age 65+; a 6% increase in the Asian population; and a 4% increase in the Hispanic ethnicity population. Compared to Virginia as a whole, the study region is more densely populated and has (proportionally) more Black/African American residents. The study region also has lower income levels and (proportionally) fewer adults age 25+ without a high school education than Virginia as a whole.

- *Mortality Profile.* In 2011, the study region had 8,584 total deaths. The leading causes of death were malignant neoplasms (cancer), heart disease, cerebrovascular disease (stroke), and chronic lower respiratory disease. The age-adjusted death rates for the study region were higher than the Virginia statewide rates overall, and for twelve of the top fourteen causes of death.

- *Maternal and Infant Health Profile.* In 2011, the study region had 22,175 pregnancies, 16,031 total live births and 125 infant deaths. Compared to Virginia as a whole, the study region had higher rates of non-marital births, teen pregnancies 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 2011, residents of the study region had 12,113 PQI hospital discharges. The age-adjusted PQI discharge rates for the study region were higher than the Virginia statewide rates overall, and for congestive heart failure, diabetes, adult asthma, hypertension and angina PQI diagnoses.

- *Behavioral Health Hospitalization Discharge Profile.* Behavioral health (BH) hospitalizations provide another important indicator of community health status. In 2011, residents of the study region had 10,056 hospital discharges from Virginia community hospitals for behavioral health conditions.[1] The leading diagnoses for these discharges were affective psychoses, general symptoms[2], and schizophrenic disorders. The age-adjusted BH discharge rates for the study region were higher than the statewide rates overall, and for affective psychoses, general symptoms, schizophrenic disorders, alcoholic psychoses, other nonorganic psychoses and drug psychoses.

- *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.

- *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, weight, alcohol, mental health, tobacco, and physical inactivity.

- *Uninsured Profile*. An estimated 143,045 (14%) nonelderly residents of the study region were uninsured at a given point in time in 2012. This included an estimated 21,587 children and 121,458 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

[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.

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 eight localities in the study region have been fully or partially designated as MUA/MUPs.

Accompanying File of City/County-Level Indicators

This report includes community health indicators for the study region as a whole. A separate Microsoft Excel file contains indicators for each city/county 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 note about zip code-level data in Appendix A.*

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

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

Appendix C. Data Sources

Appendix C provides a list of the data sources used in the analysis of 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 SNGH. 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 community stakeholders identified by SNGH. A total of 77 stakeholders 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

Access Partnership (2)	Norfolk Public Schools
Alzheimer's Association (Southeastern VA Chapter)	Norfolk State University
Atlantic Orthopedic Specialist	Old Dominion University (2)
Beach Health Clinic	PDBHS
Chesapeake Care, Inc./Hampton Roads Dental Center	People In Need Ministry
Chesapeake Health Department	Portsmouth Department of Behavioral Healthcare
Chesapeake Redevelopment and Housing Authority	Portsmouth Health Department
Children's Specialty Group, PLLC (2)	Prime Plus
Coalition on Infant and Child Health/Eastern Virginia Medical School	Resident of Norfolk
College of Health Sciences	Retired Director of Norfolk Public Library
Commonwealth Memory Care at Norfolk	RG Electric Company, Inc.
Ear, Nose, and Throat Ltd.	Senior Services of Southeastern Virginia
Eastern Virginia Medical School (9)	Sentara Heart Hospital
Eastern Virginia Medical School Department of Otolaryngology	Sentara Medical Group (5)
Emergency Physicians of Tidewater (2)	Sentara Norfolk General Hospital Patient & Family Advisory Council
EMS Plaza #16	The Planning Council
Faith Deliverance Christian Center	United Way of South Hampton Roads
Foodbank of SEVA	Virginia Beach Department of Human Services, MHSA
Free Foundation of South Hampton Roads	Virginia Beach EMS (2)
GLST	Virginia Beach United Methodist Church
Hampton Roads Community Health Centers	Virginia Department of Health
Medical Transport	VisionWalk
Norfolk Community Services Board (2)	Williams Mullen
Norfolk Department of Public Health (2)	Women’s Heart Health
Norfolk Fire Rescue (2)	YMCA of South Hampton Roads (2)
Norfolk Plastic Surgery PC	*Unknown Organization* (5)

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	79%	61
Diabetes	70%	54
Heart Disease	65%	50
High Blood Pressure	64%	49
Cancer	55%	42
Childhood Obesity	55%	42
Depression	52%	40
Alcohol Use	49%	38
Mental Health Conditions (other than depression)	48%	37
Stroke	47%	36
Substance Abuse - Illegal Drugs	47%	36
Dental Care/Oral Health-Adult	44%	34
Tobacco Use	44%	34
Substance Abuse - Prescription Drugs	40%	31
Alzheimer's Disease	34%	26
Domestic Violence	30%	23
Infant and Child Health	30%	23
Teen Pregnancy	30%	23
Asthma	29%	22
Renal (kidney) Disease	29%	22
Chronic Pain	27%	21
HIV/AIDS	26%	20
Sexually Transmitted Diseases	26%	20
Prenatal & Pregnancy Care	25%	19
Dental Care/Oral Health-Pediatric	22%	17
Respiratory Diseases (other than asthma)	22%	17
Injuries	21%	16
Physical Disabilities	20%	15
Infectious Diseases	18%	14
Neurological Disorders (seizures, multiple sclerosis)	18%	14
Arthritis	16%	12
Intellectual/Developmental Disabilities	16%	12
Autism	13%	10
Orthopedic Problems	12%	9
Environmental Quality	8%	6

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…

Important Community Health Concerns Identified by Survey Respondents (continued)

Other Important Community Health Concerns Identified by Survey Respondents in Open-Ended Responses	
Response #	**Reponses**
1	Aging (as age increases, support systems decrease, leading to preventable medical mishaps)
2	Community Health!
3	From my vantage point, we are having an epidemic of substance use disorders, and severe mental health disorders without the needed resources for treatment. We are also witnessing concomitant health problems as a result of these illnesses and sometimes the treatment of them.
4	GI Problems
5	Having chaired the Hampton Roads VisionWalk for two consecutive years and being vision impaired myself, I see a real need for education, awareness and community assistance for the large vision impaired population here in Hampton Roads. I have had the opportunity to speak at numerous community organizations about vision loss and am astounded by the number of people who are affected or have family and friends that are impacted by vision loss.
6	I can't say that any on the list are unimportant; however if I chose the top 5 in our region: • Obesity (child and adult); • Dental caries (adult and children); • Tobacco use; diabetes; • High blood pressure; • And omitted was infant mortality.
7	Parkinson's Disease
8	Sickle Cell Disease
9	These are all really problems for us. If I had to pick the priorities though it would be: • Obesity (and related conditions like obesity, heart disease, HTN, stroke, etc.), • Tobacco use (and associated conditions), • Asthma, • Infant/child health, • Prenatal/pregnancy • STDs
10	Vascular disease (e.g. PVD, aortic disease)

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
Behavioral Health Services (including mental health, substance use and intellectual disability)	64%	46
Health Care Services for the Uninsured and Underinsured	58%	42
Aging Services	57%	41
Homeless Services	53%	38
Dental Care/Oral Health Services-Adult	49%	35
Health Care Insurance Coverage (private and government)	44%	32
Long Term Care Services	40%	29
Health Promotion and Prevention Services	39%	28
Chronic Disease Services (including screening and early detection)	35%	25
Social Services	35%	25
Transportation	33%	24
Chronic Pain Management Services	29%	21
Cancer Services (screening, diagnosis, treatment)	28%	20
Early Intervention Services for Children	26%	19
Maternal, Infant & Child Health Services	26%	19
Public Health Services	26%	19
Patient Self Management Services (e.g. nutrition, exercise, taking medications)	25%	18
Primary Health Care Services	25%	18
Family Planning Services	24%	17
Job/Vocational Retraining	22%	16
Dental Care/Oral Health Services-Pediatric	21%	15
School Health Services	19%	14
Domestic Violence Services	17%	12
Food Safety Net (food bank, community gardens)	17%	12
Home Health Services	17%	12
Hospice Services	17%	12
Hospital Services (including emergency, inpatient and outpatient)	10%	7
Workplace Health and Safety Services	10%	7
Pharmacy Services	8%	6
Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	8%	6
Physical Rehabilitation	7%	5
Environmental Health Services	3%	2

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] *Seventy-two (72) of the 77 survey respondents answered this question.*

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

Other Important Community Health Services Gaps Identified by Survey Respondents in Open-Ended Responses	
Response #	**Responses**
1	Access to care
2	Access to mobility equipment if uninsured or underinsured.
3	Better community information and referral services. This would help access a lot. The information and referral services in Hampton Roads do not advertise their existence enough. This must be strengthened first and foremost. This would help all.
4	Community Health Clinics and services are in dire need. If you want to charge big bucks for the insured take care of the uninsured.
5	Especially needed: dental services for uninsured/indigent.
6	Healthy Communities infrastructure like walkability, bikeability, and associated planning and interventions
7	High quality mental health services are desperately needed in this region! Too many ER and primary care visits are complicated by mental health issues that personnel do not have the skills to address.
8	I have referred numerous friends and neighbors to NDC for primary health care services only to be told by my friends/neighbors that NDC is no longer accepting patients (Medicare or private insurance). Primary health care at NDC is outstanding and would benefit Sentara by increasing providers and patient base.
9	Need better public transport, need something like a metro connecting all major surrounding areas
10	Reaching into the African American Community to teach and educate about how to find ways to reach out for health needs service, and how to participate in free services, for health services and needs.
11	• The need for strengthening public health, school health and social services is checked due to the significant community need and growing loss of funding in the current economic climate. • Also, with implementation of ACA, community support and support of health partners is needed to ensure continued viability of these services.
12	Too many uninsured and too few physicians to care for them, particularly in the subspecialty arena.

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 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 1,162,011 people. The population is expected to increase to 1,192,274 by 2017. It is projected that population growth will occur in all age groups, including a 10% increase in seniors age 65+. Focusing on racial background, growth is projected for all populations, including a 6% increase in the Asian population. The Hispanic ethnicity 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	1,145,548	1,162,011	1,192,274	3%
Population Density (per Sq Mile)	530.1	537.7	551.7	3%
Total Households	424,685	427,822	440,974	3%
Population by Age				
Children Age 0-17	276,466	271,083	274,440	1%
Adults Age 18-29	222,929	226,516	229,384	1%
Adults Age 30-44	226,763	228,959	233,791	2%
Adults Age 45-64	295,194	303,538	309,481	2%
Seniors Age 65+	124,196	131,915	145,178	10%
Population by Race/Ethnicity				
Asian	43,911	45,465	48,107	6%
Black/African American	364,354	369,845	378,288	2%
White	673,797	681,137	697,619	2%
Other or Multi-Race	63,486	65,564	68,260	4%
Hispanic Ethnicity[4]	61,173	63,134	65,395	4%

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

[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 1,162,011 people. Focusing on population rates in the lower part of the Exhibit, compared to Virginia as a whole, the study region is more densely populated and has (proportionally) more Black/African American residents. The study region also has lower income levels and (proportionally) fewer adults age 25+ without a high school education 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	1,162,011	8,154,815
Age	Children Age 0-17	271,083	1,857,225
	Adults Age 18-29	226,516	1,375,674
	Adults Age 30-44	228,959	1,642,637
	Adults Age 45-64	303,538	2,233,940
	Seniors Age 65+	131,915	1,045,339
Sex	Female	587,220	4,148,680
	Male	574,791	4,006,135
Race	Asian	45,465	459,660
	Black/African American	369,845	1,579,659
	White	681,137	5,573,480
	Other or Multi-Race	65,564	542,016
Ethnicity	Hispanic Ethnicity[5]	63,134	655,986
Income	Low Income Households (Households with Income < $25,000)	81,398	553,382
Education	Population Age 25+ Without a High School Diploma	75,792	675,228
Population Rates			
Total	Population Density (pop. per sq. mile)	537.7	202.2
Age	Children Age 0-17 pct. of Total Pop.	23%	23%
	Adults Age 18-29 pct. of Total Pop.	19%	17%
	Adults Age 30-44 pct. of Total Pop.	20%	20%
	Adults Age 45-64 pct. of Total Pop.	26%	27%
	Seniors Age 65+ pct. of Total Pop.	11%	13%
Sex	Female pct. of Total Pop.	51%	51%
	Male pct. of Total Pop.	49%	49%
Race	Asian pct. of Total Pop.	4%	6%
	Black/African American pct. of Total Pop.	32%	19%
	White pct. of Total Pop.	59%	68%
	Other or Multi-Race pct. of Total Pop.	6%	7%
Ethnicity	Hispanic Ethnicity pct. of Total Pop.	5%	8%
Income	Per Capita Income	$27,896	$34,307
	Median Household Income	$57,008	$64,118
	Low Income Households (Households with Income < $25,000) pct. of Total Households	19%	18%
Education	Pop. Age 25+ Without a High School Diploma pct. of Total Pop. Age 25+	10%	12%

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

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

3. Mortality Profile

Mortality is one of the most commonly cited community health indicators. As shown in *Exhibit II-3*, in 2011, the study region had 8,584 total deaths. The leading causes of death were malignant neoplasms (cancer) (1,974), heart disease (1,848), and cerebrovascular disease (stroke) (441), and chronic lower respiratory disease (440). The age-adjusted death rates for the study region were higher than the Virginia statewide rates overall, and for twelve of the top fourteen causes of death. *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		
Deaths by All Causes	8,584	60,325
Deaths by Top 14 Causes		
Malignant Neoplasms (Cancer) Deaths	1,974	14,261
Heart Disease Deaths	1,848	13,201
Cerebrovascular Disease (Stroke) Deaths	441	3,327
Chronic Lower Respiratory Disease Deaths	440	3,097
Unintentional Injury Deaths	353	2,726
Alzheimer's Disease Deaths	293	1,800
Diabetes Mellitus Deaths	259	1,628
Nephritis and Nephrosis Deaths	220	1,425
Septicemia Deaths	191	1,372
Influenza and Pneumonia Deaths	170	1,404
Suicide Deaths	151	1,052
Chronic Liver Disease Deaths	110	725
Primary Hypertension and Renal Disease Deaths	94	569
Pnuemonitis Disease Deaths	78	560
Age Adjusted Death Rates per 100,000 Population		
Total Deaths	798.3	735.8
Malignant Neoplasms (Cancer) Deaths	182.1	169.5
Heart Disease Deaths	172.7	161.3
Cerebrovascular Disease (Stroke) Deaths	41.7	41.4
Chronic Lower Respiratory Disease Deaths	42.5	38.4
Unintentional Injury Deaths	31.5	33.4
Alzheimer's Disease Deaths	28.5	23.0
Diabetes Mellitus Deaths	24.0	19.4
Nephritis and Nephrosis Deaths	20.9	17.6
Septicemia Deaths	17.9	16.8
Influenza and Pneumonia Deaths	16.0	17.4
Suicide Deaths	13.0	12.5
Chronic Liver Disease Deaths	9.4	8.1
Primary Hypertension and Renal Disease Deaths	8.5	6.9
Pnuemonitis Disease Deaths	7.4	7.0

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

4. Maternal and Infant Health Profile

Maternal and infant health indicators are another widely cited category of community health. As shown in *Exhibit II-4,* in 2011, the study region had 22,175 pregnancies, 16,031 total live births and 125 infant deaths. Compared to Virginia as a whole, the study region had higher rates of non-marital births, teen pregnancies and five-year infant mortality. *Note: Maps 18-21 in Appendix A show the geographic distribution of births by zip code.*

Exhibit II-4
Maternal and Infant Health Profile, 2011

Indicator	Study Region	Virginia
Counts		
Total Pregnancies	22,175	132,429
Induced Terminations of Pregnancy	5,330	23,635
Natural Fetal Deaths	814	6,269
Total Live Births	16,031	102,525
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	1,455	8,204
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks)	1,990	13,500
Non-Marital Births	6,538	36,390
Total Teenage (age 10-19) Pregnancies	1,800	9,630
Live Births to Teens Age 10-19	1,146	6,572
Live Births to Teens Age 18-19	857	4,807
Live Births to Teens Age 15-17	282	1,708
Live Births to Teens Age <15	7	57
Total Infant Deaths	125	685
Rates		
Live Birth Rate per 1,000 Population	13.9	12.7
Low Weight Births pct. of Total Live Births	9%	8%
Births Without Early Prenatal Care (No Prenatal Care in First 13 Weeks) pct. of Total Live Births	12%	13%
Non-Marital Births pct. of Total Live Births	41%	35%
Teenage (age 10-19) Pregnancy Rate per 1,000 Teenage Female Population	24.4	18.6
Five-Year Average Infant Mortality Rate per 1,000 Live Births) 2007-2011	8.7	7.0

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

5. 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.[6] 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*, in 2011, residents of the study region had 12,113 PQI hospital discharges.[7] The leading diagnoses for these discharges were congestive heart failure (3,255), bacterial pneumonia (2,025), and diabetes (1,989). The age-adjusted PQI discharge rates for the study region were higher than the Virginia statewide rates overall, and for congestive heart failure, diabetes, adult asthma, hypertension and angina PQI diagnoses. *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
Total PQI Discharges		
Total PQI Discharges by All Diagnoses	12,113	83,392
PQI Discharges by Diagnosis		
Congestive Heart Failure PQI Discharges	3,255	18,990
Bacterial Pneumonia PQI Discharges	2,025	16,221
Diabetes PQI Discharges	1,989	11,326
Urinary Tract Infection PQI Discharges	1,346	10,496
Chronic Obstructive Pulmonary Disease (COPD) PQI Discharges	1,302	11,439
Adult Asthma PQI Discharges	1,033	6,419
Hypertension PQI Discharges	428	2,898
Dehydration PQI Discharges	416	3,401
Perforated Appendix PQI Discharges	187	1,487
Angina PQI Discharges	132	715
Age Adjusted PQI Discharge Rates per 100,000 Population		
All Diagnoses	1,113.4	1,006.8
Congestive Heart Failure	307.7	233.0
Bacterial Pneumonia	190.1	197.4
Diabetes	171.1	133.2
Urinary Tract Infection	129.7	131.0
Chronic Obstructive Pulmonary Disease (COPD)	120.5	134.2
Adult Asthma	89.3	75.3
Hypertension	38.1	34.8
Dehydration	39.0	41.4
Perforated Appendix	16.0	18.1
Angina	11.9	8.3

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.

[6] 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

[7] 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,* in 2011, residents of the study region had 10,056 hospital discharges from Virginia community hospitals for behavioral health conditions.[8] The leading diagnoses for these discharges were affective psychoses (4,064), general symptoms (1,714) and schizophrenic disorders (1,711). The age-adjusted BH discharge rates for the study region were higher than the statewide rates overall, and for affective psychoses, general symptoms, schizophrenic disorders, alcoholic psychoses, other nonorganic psychoses and drug psychoses. *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		
Total BH Discharges by All Diagnoses	10,056	64,892
BH Discharges by Diagnosis		
Affective Psychoses [9]	4,064	27,277
General Symptoms [10]	1,714	11,135
Schizophrenic Disorders	1,711	8,042
Alcoholic Psychoses	458	3,283
Depressive Disorder, Not Elsewhere Classified	336	2,785
Other Nonorganic Psychoses	324	2,148
Drug Psychoses	260	1,321
Alcoholic Dependence Syndrome	259	2,161
Adjustment Reaction	223	2,123
Neurotic Disorders	175	1,351
Age Adjusted BH Discharge Rates per 100,000 Population		
All Diagnoses	871.1	786.8
Affective Psychoses	346.1	332.7
General Symptoms	157.7	136.4
Schizophrenic Disorders	144.6	95.0
Alcoholic Psychoses	39.0	38.0
Depressive Disorder, Not Elsewhere Classified	28.7	34.2
Other Nonorganic Psychoses	27.9	26.2
Drug Psychoses	22.4	16.0
Alcoholic Dependence Syndrome	21.9	25.2
Adjustment Reaction	18.6	26.2
Neurotic Disorders	15.3	16.4

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.

[8] 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.
[9] Includes major depressive, bipolar affective and manic depressive disorders.
[10] 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, 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. *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+	890,928	100%
Risk Factors		
Less than Five Servings of Fruits and Vegetables Per Day*	700,043	79%
Overweight or Obese[11]	548,778	62%
Not Meeting Recommendations for Physical Activity in the Past 30 Days	459,539	52%
Smoker*	182,908	21%
At Risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	174,015	20%
Chronic Conditions		
High Cholesterol (was checked, and told by a doctor or other health professional it was high)*	316,222	35%
High Blood Pressure (told by a doctor or other health professional)*	257,724	29%
Arthritis (told by a doctor or other health professional)*	213,388	24%
Diabetes (told by a doctor or other health professional)*	83,200	9%
Asthma (told by a doctor or other health professional)*	63,606	7%
General Health Status		
Limited in any Activities because of Physical, Mental or Emotional Problems*	173,263	19%
Fair or Poor Health Status*	139,238	16%

** Indicators marked (*) are based on respondent self reports. Other indicators are calculated by Centers for Disease Control based on Virginia Behavioral Risk Factor Behavioral Surveillance System results.*

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.

[11] 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, alcohol, mental health, tobacco, and physical activity. *Note: Maps 28-29 in Appendix A show 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	91,678	100%
Less than the Recommended Intake of Vegetables	81,307	89%
Less than the Recommended Intake of Fruit	78,410	86%
Overweight or Obese[12]	27,829	30%
Have at least One Drink of Alcohol at least One Day in the Past 30 Days*	25,738	28%
Feel Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)*	22,589	25%
Used Tobacco in the Past 30 Days*	17,488	19%
Not Meeting Recommendations for Physical Activity in the Past Week*	14,366	16%

** Indicators marked (*) are based on respondent self reports. Other indicators are calculated by Centers for Disease Control based on Virginia Behavioral Risk Factor Behavioral Surveillance System results.*

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.

[12] 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.[13] An estimated 143,045 (14%) nonelderly residents of the study region were uninsured at a given point in time in 2012. This included an estimated 21,587 children and 121,458 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), 2012

Indicator	Study Region
Estimated Uninsured Counts	
Uninsured Nonelderly Age 0-64	143,045
Uninsured Children Age 0-18	21,587
Uninsured Children <100% FPL	6,563
Uninsured Children 100-200% FPL	8,371
Uninsured Children 201-300% FPL	3,220
Uninsured Children 301%+ FPL	3,432
Uninsured Adults Age 19-64	121,458
Uninsured Adults <100% FPL	56,429
Uninsured Adults 100-200% FPL	33,598
Uninsured Adults 201-300% FPL	19,316
Uninsured Adults 301%+ FPL	12,115
Uninsured Adults Under 133% FPL[14]	*60,293*
Estimated Uninsured Rates	
Uninsured Nonelderly Percent	14%
Uninsured Children Percent	8%
Uninsured Adults Percent	16%

Source: Estimates produced by Community Health Solutions using the (2011) Profile of the Uninsured report produced for Virginia Health Care Foundation by the Urban Institute and local demographic estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

[13] For more information, please see: http://aspe.hhs.gov/poverty/12poverty.shtml
[14] 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 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*, all eight localities in the study region have been fully or partially designated as MUA/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/Populations Profile

Locality	MUA/MUP Designation	Census Tracts
Chesapeake, City of	Partial	8 of 41 Census Tracts
Franklin, City of	Full	2 of 2 Census Tracts
Isle of Wight County	Full	8 of 8 Census Tracts
Norfolk, City of	Partial	31 of 80 Census Tracts
Portsmouth, City of	Partial	11 of 31 Census Tracts
Southampton County	Full	5 of 5 Census Tracts
Suffolk, City of	Full	28 of 28 Census Tracts
Virginia Beach, City of	Partial	3 of 99 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 zip code-level study region population on key demographic and health indicators. The results can also 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 Disease (Stroke) Deaths, 2011
2. Population Density, 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 who had No 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

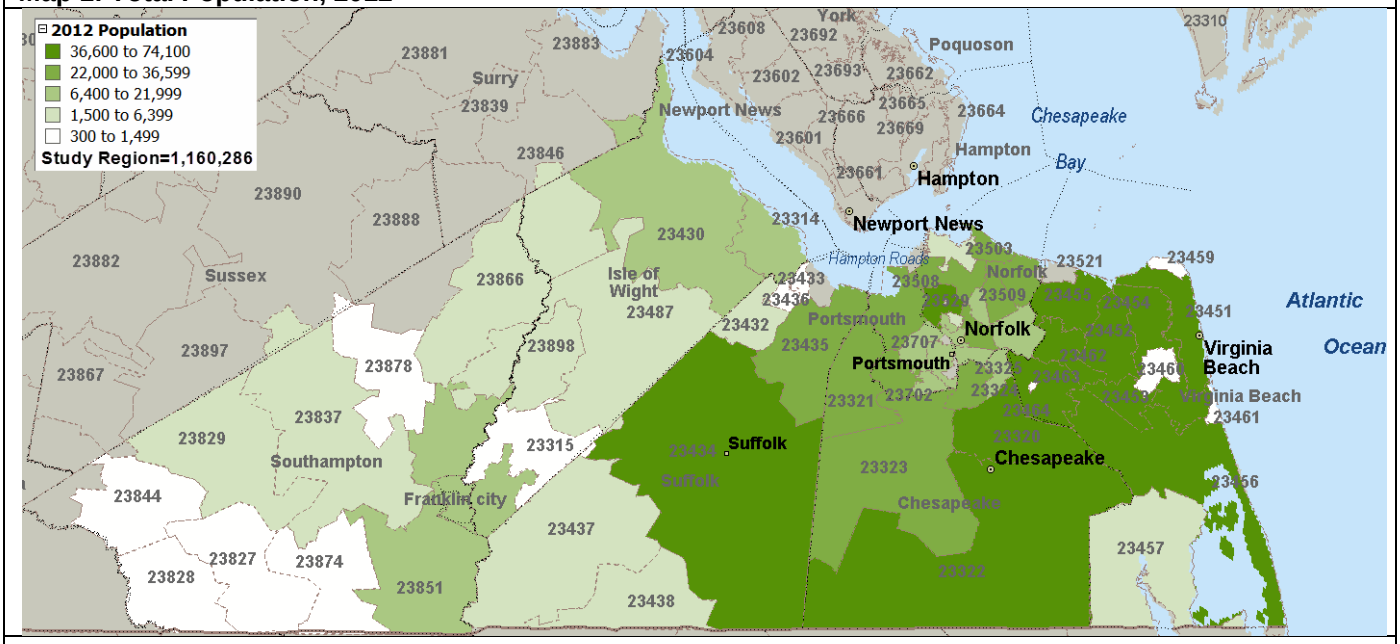
1. The maps and data include 58 zip codes, as identified by the Sentara Norfolk General Hospital (SNGH), most of which fall within the cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach; and the counties of Isle of Wight and Southampton. Because zip code boundaries do not automatically align with city/county boundaries, there are some zip codes that extend beyond the county boundaries. Additionally, not all zip codes in each of the eight localities were identified by SNGH as part of its study region. Consequently, the combined zip code-level totals for population, deaths, births, hospital discharges, etc. differ from the city/county-level study region totals listed throughout the body of the report.

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.

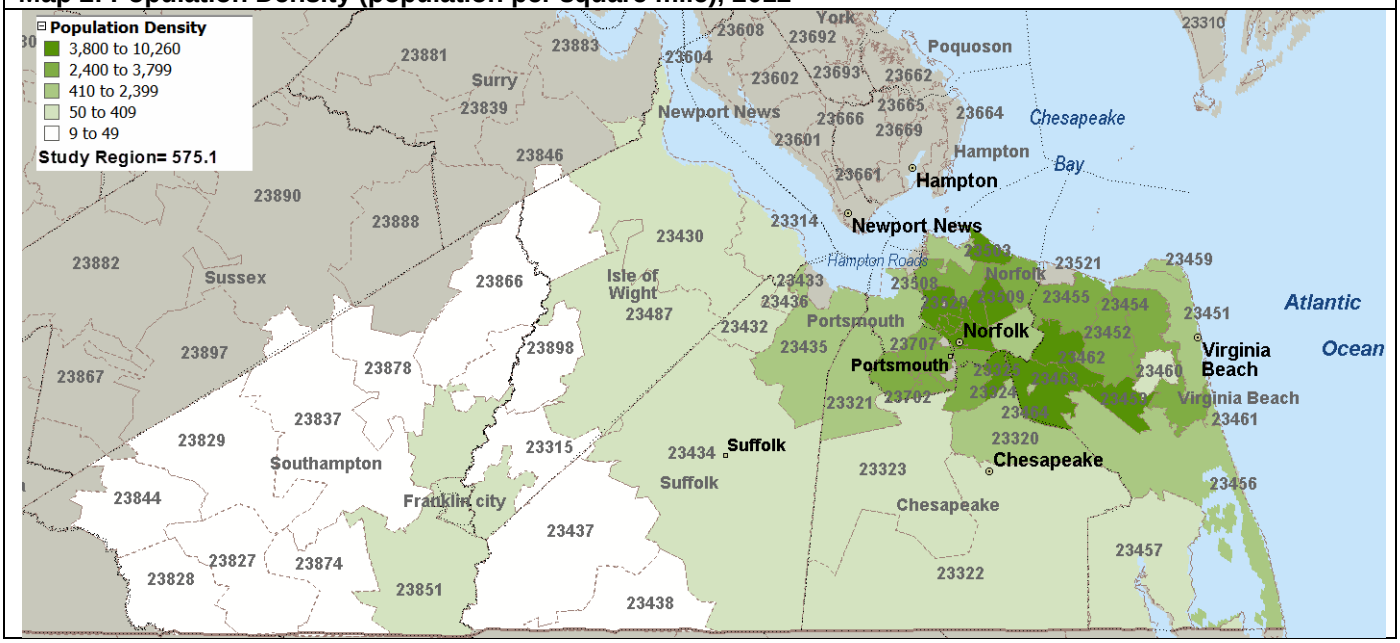
3. Data are presented in quintiles (categorized in groups of five).

4. Gray shading indicates either zip codes not included in the SNGH study region, or zero values for zip codes that are included in the SNGH study region. SNGH study region zip codes with zero values are noted.

Map 1: Total Population, 2012

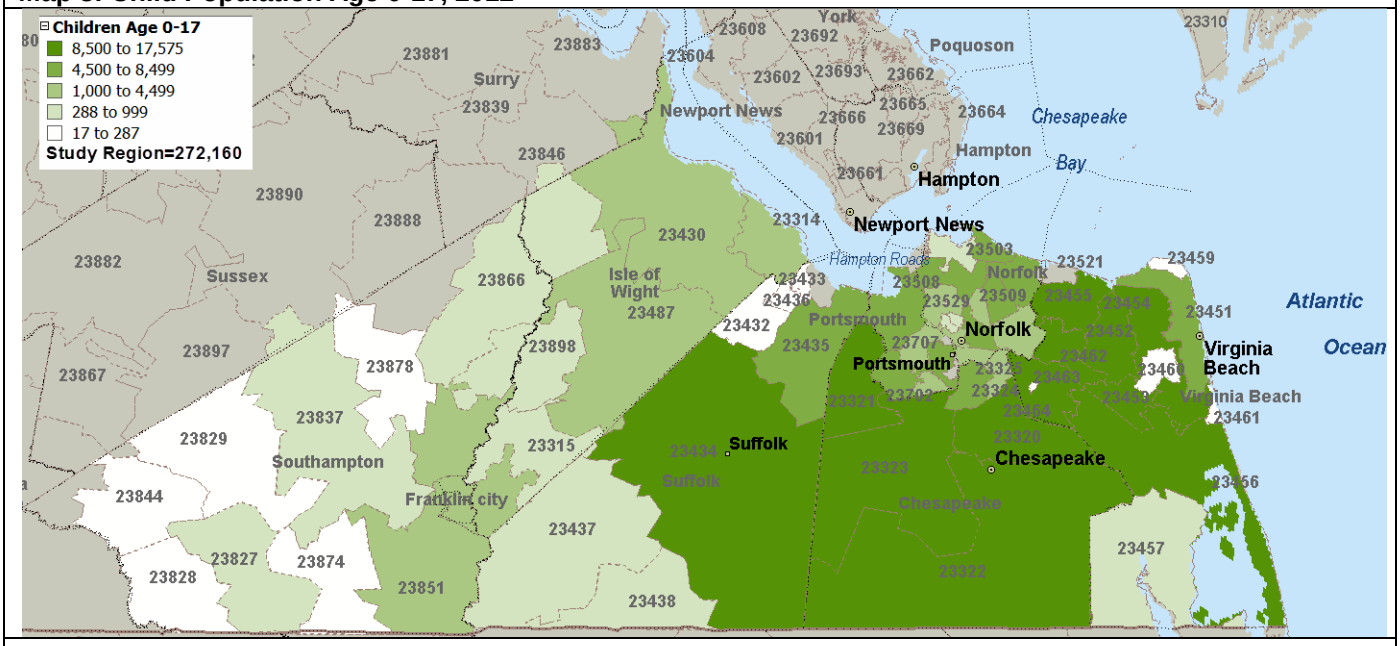


Map 2: Population Density (population per square mile), 2012

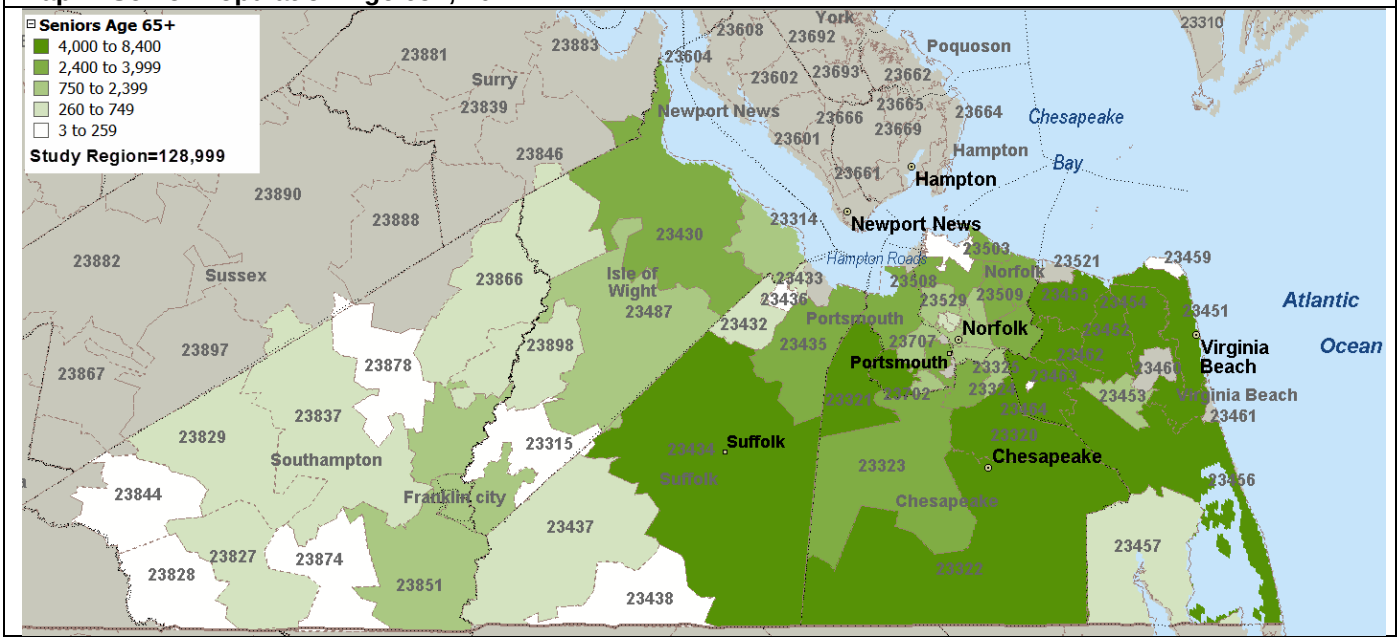


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 3: Child Population Age 0-17, 2012



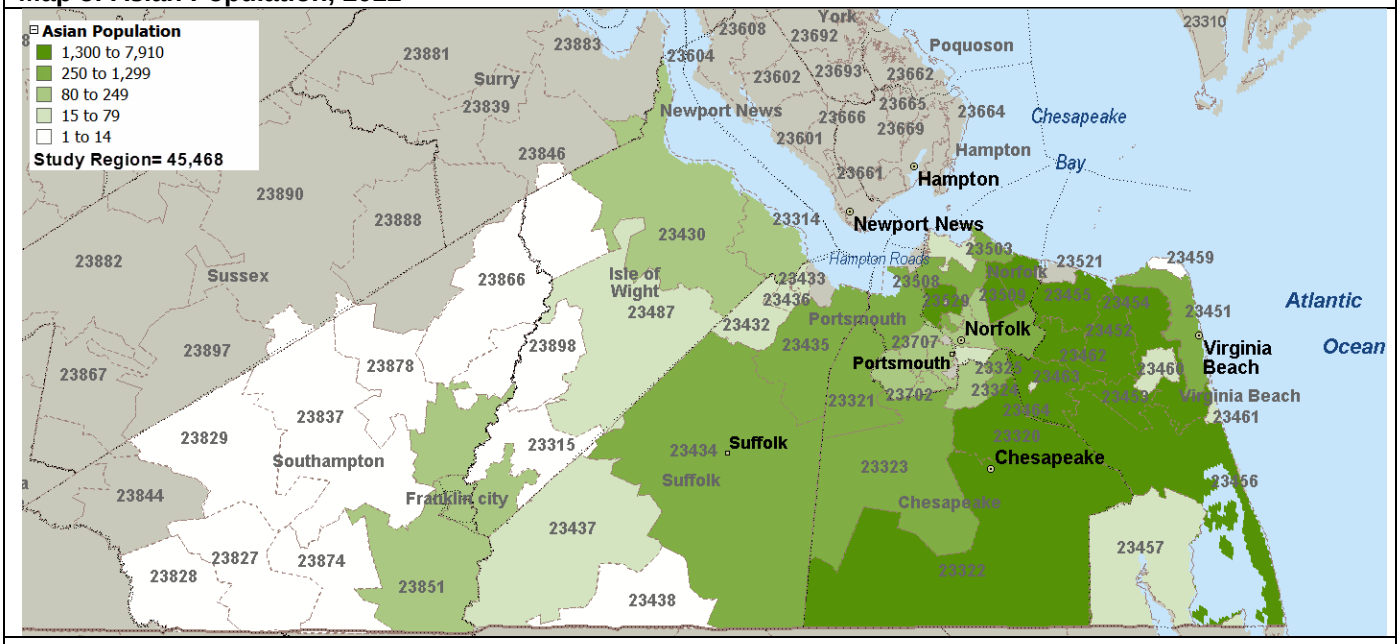
Map 4: Senior Population Age 65+, 2012*



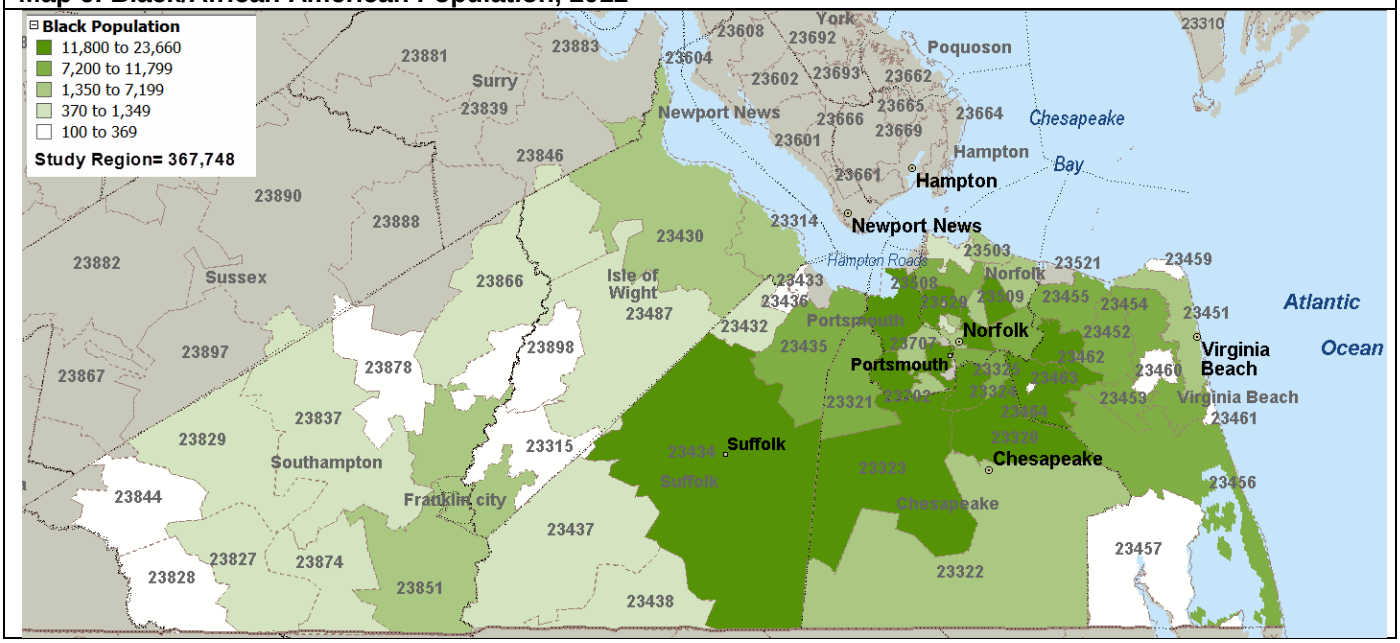
**There were no estimated seniors age 65+ for zip codes 23460 and 23461.*

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

Map 5: Asian Population, 2012*

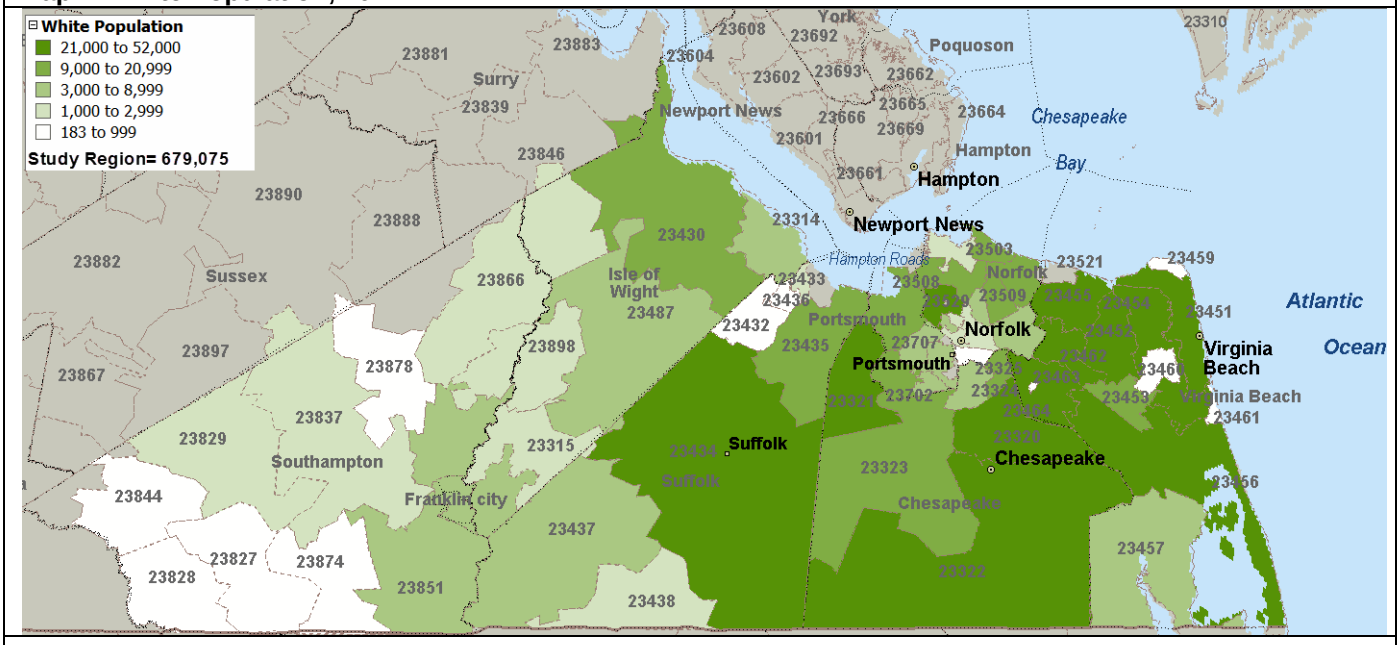


Map 6: Black/African American Population, 2012

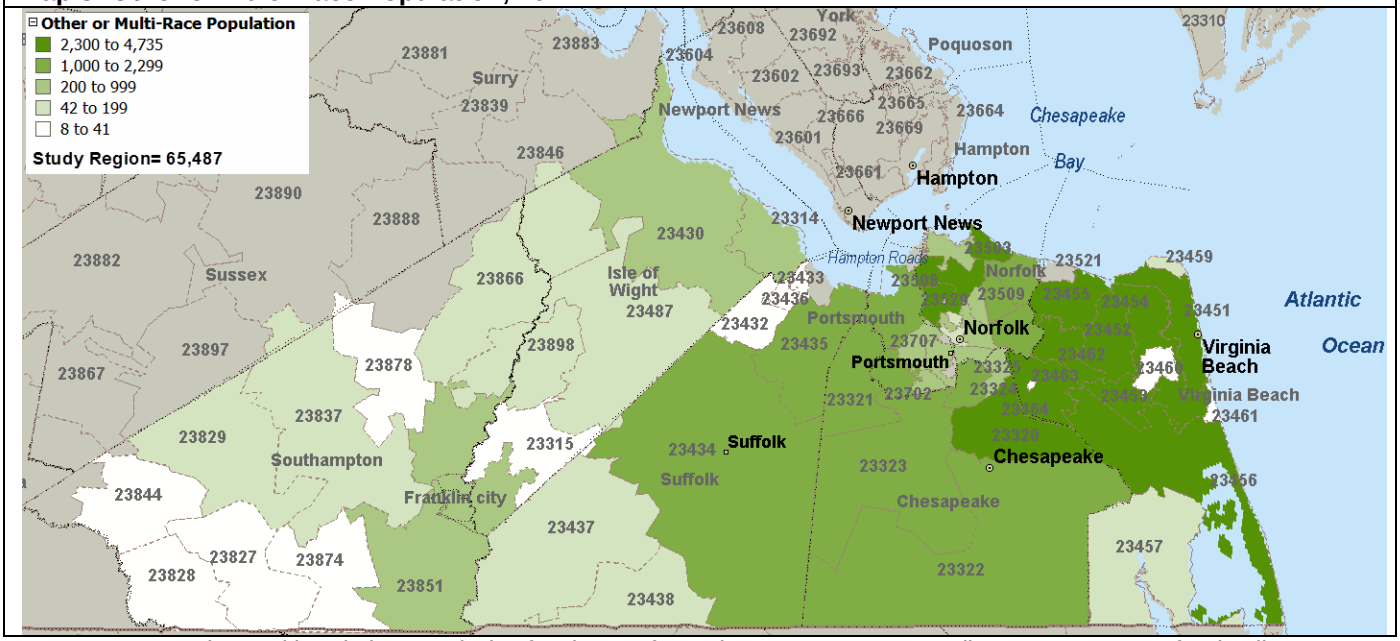


**There were no estimated Asian residents for zip code 23844.*
Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 7: White Population, 2012

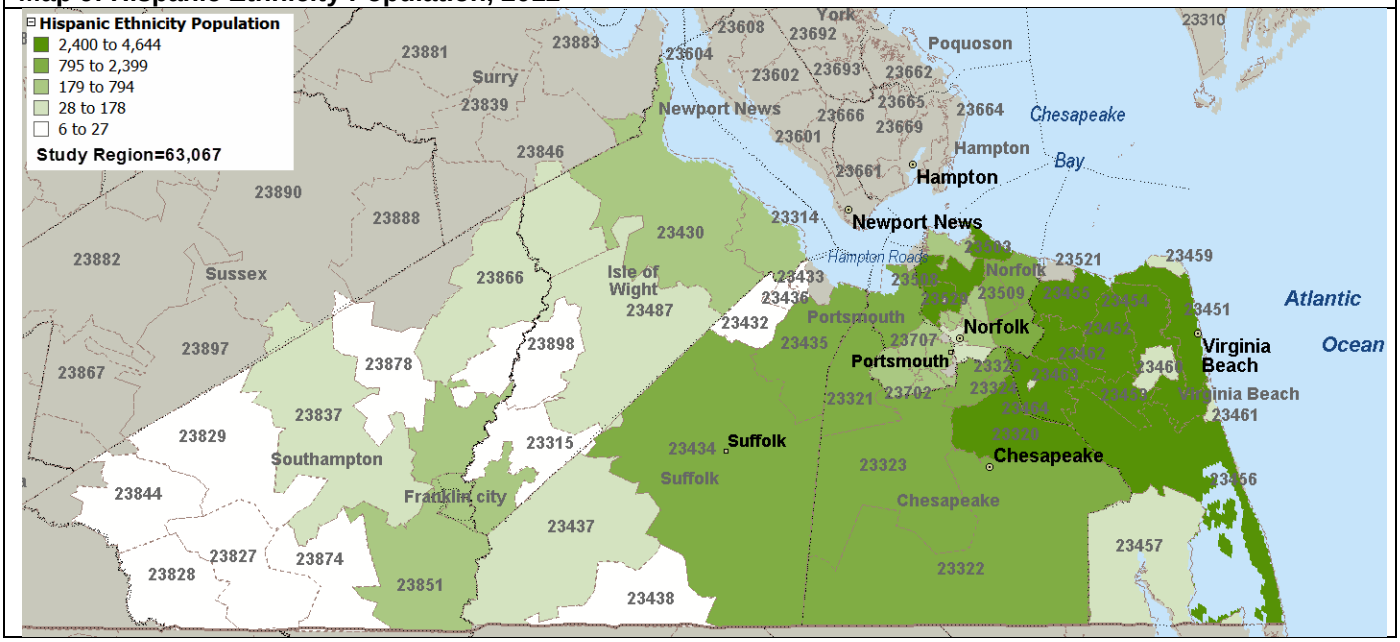


Map 8: Other or Multi-Race Population, 2012



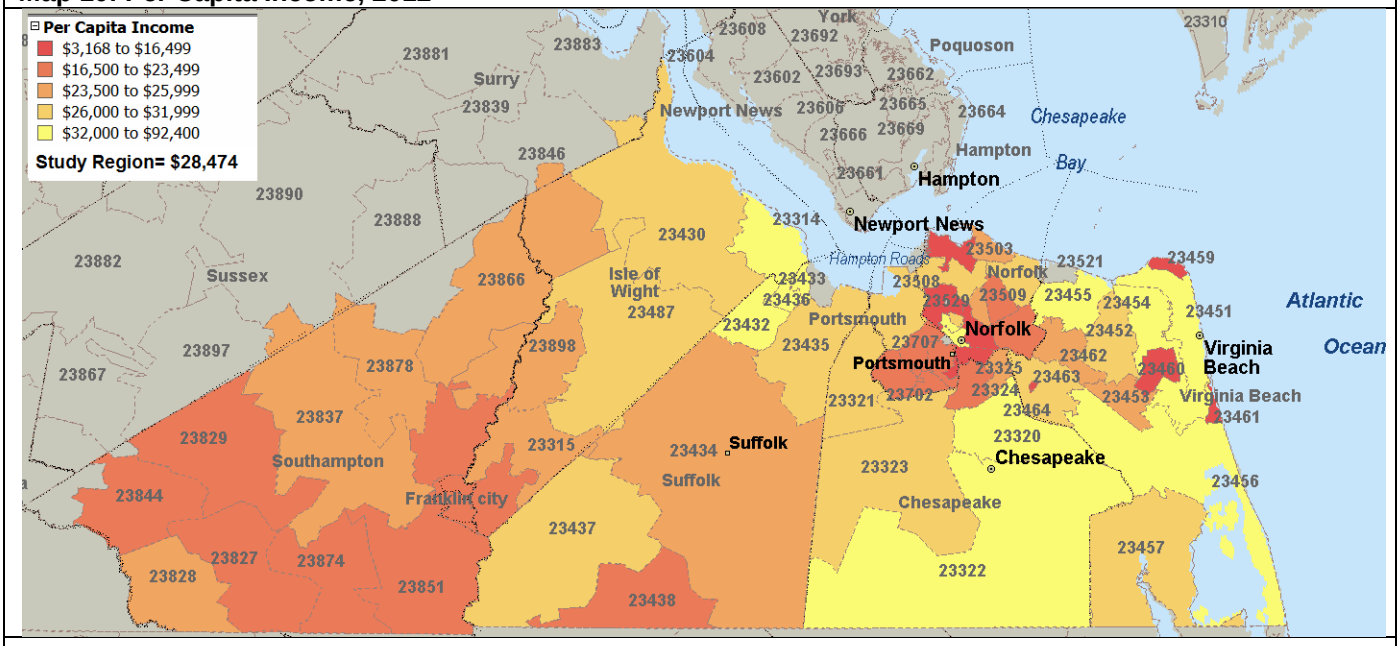
Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 9: Hispanic Ethnicity Population, 2012

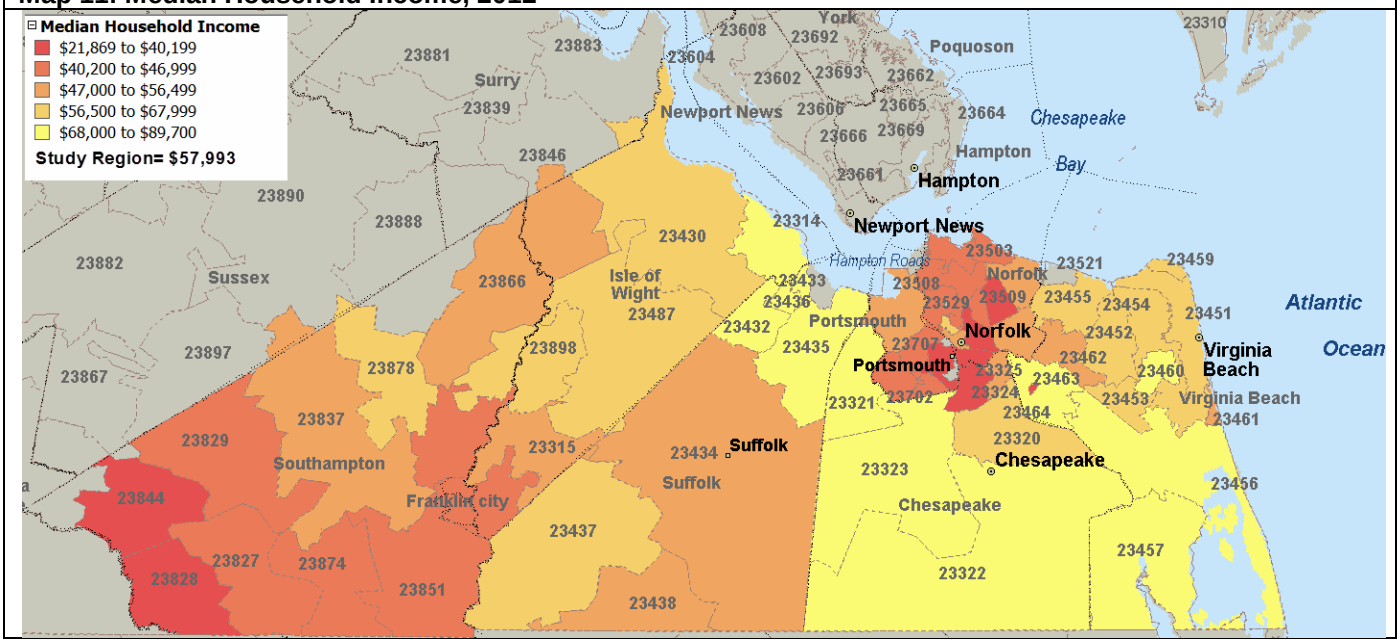


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 10: Per Capita Income, 2012

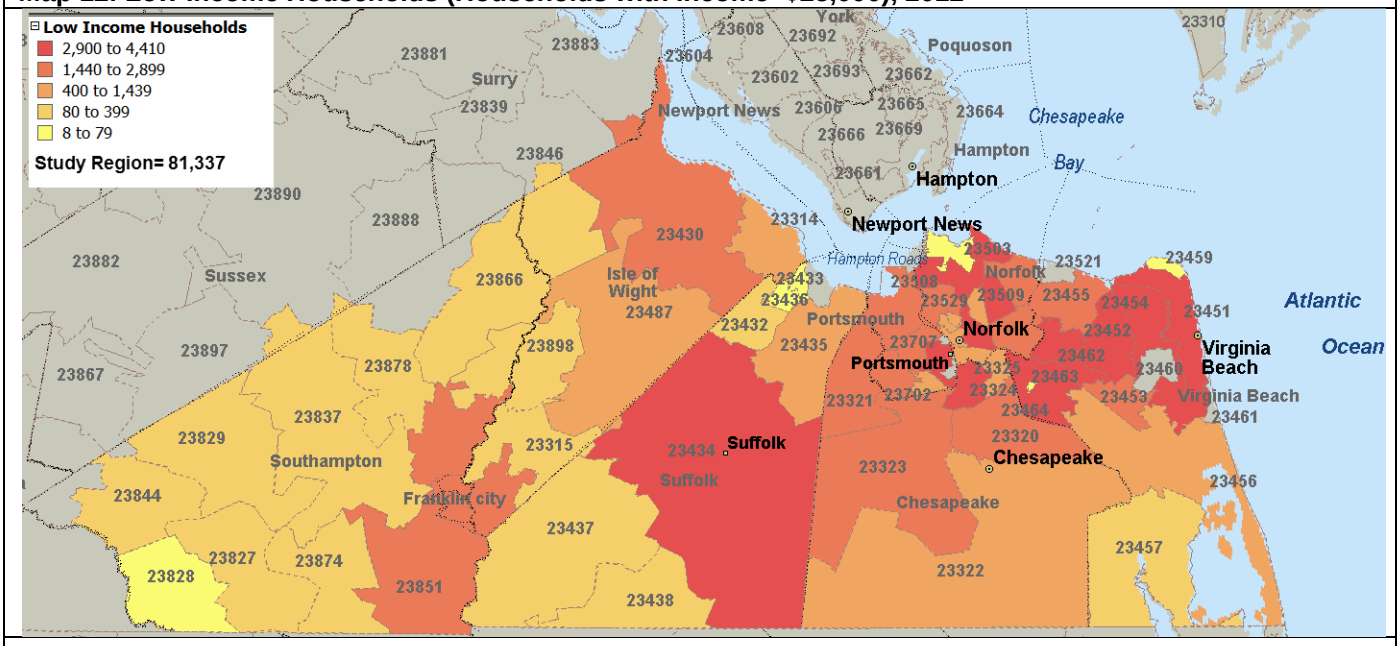


Map 11: Median Household Income, 2012

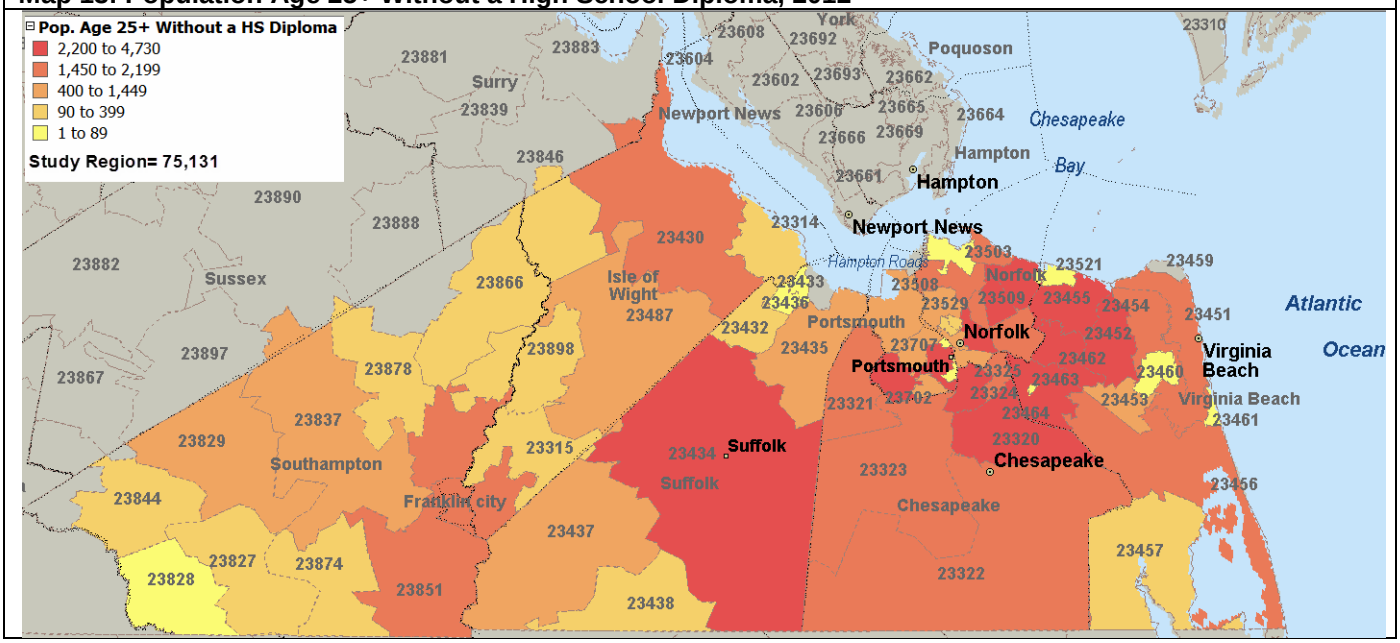


Source: Community Health Solutions analysis of estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

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



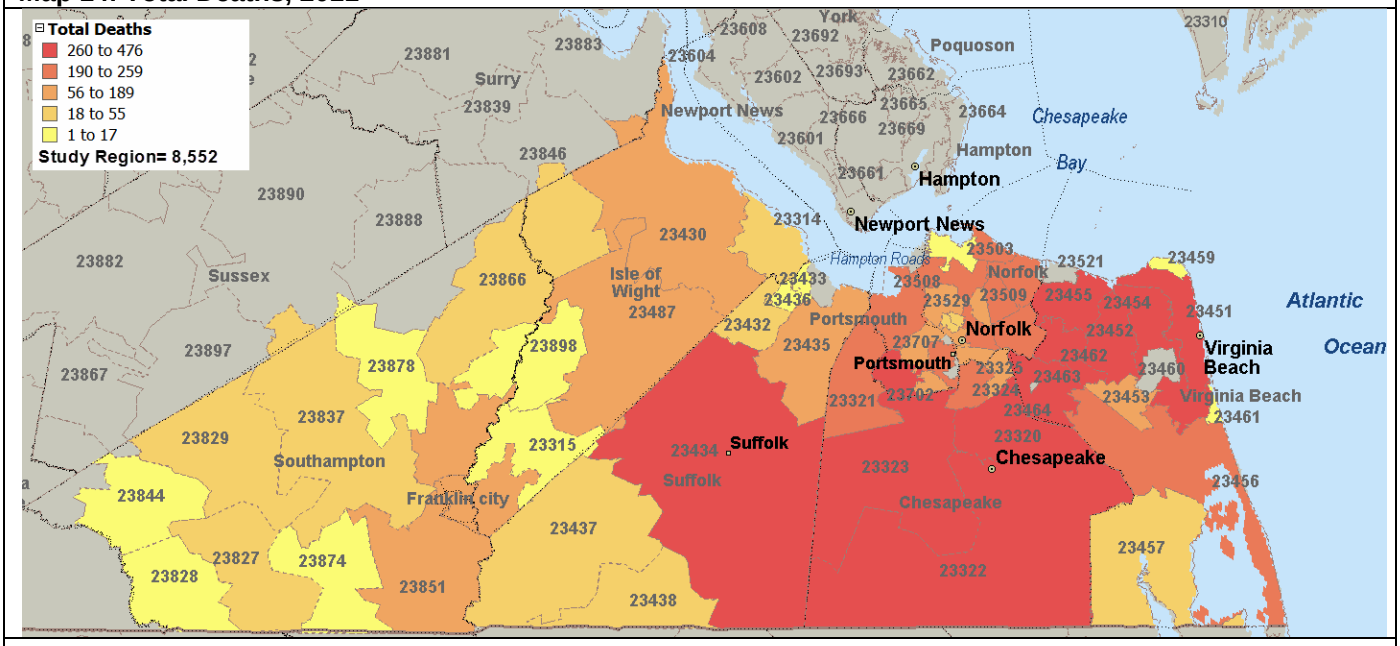
Map 13: Population Age 25+ Without a High School Diploma, 2012*



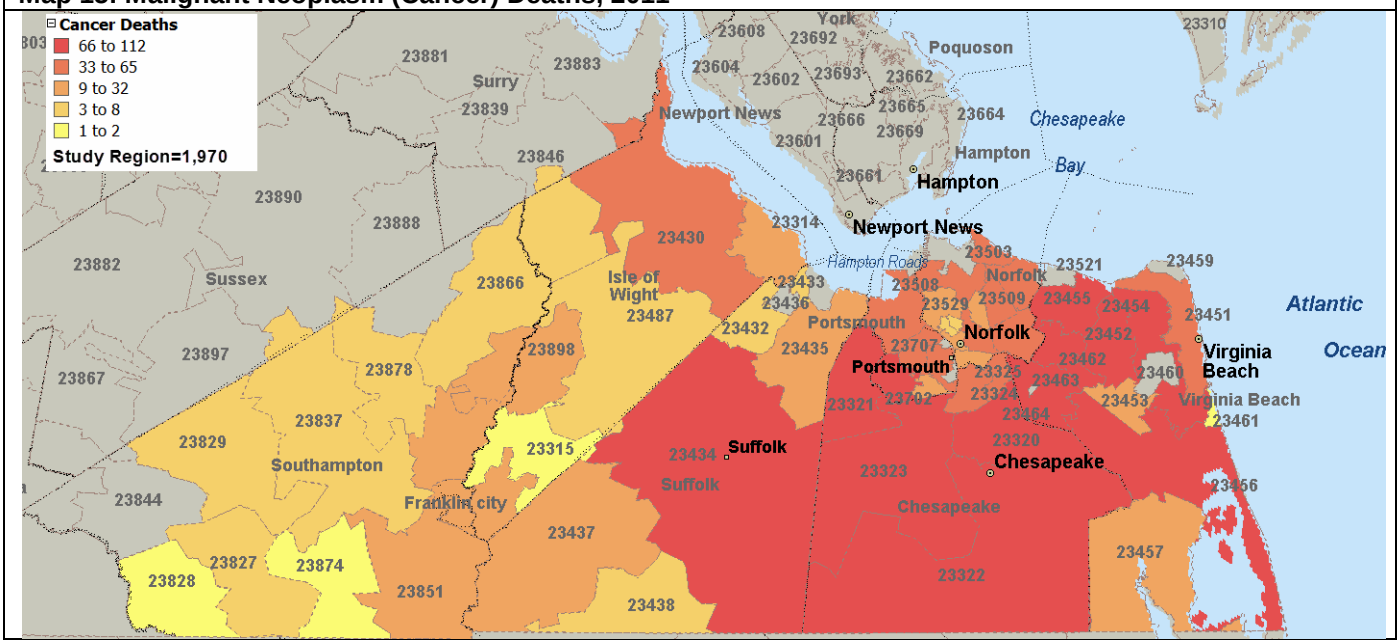
**There were no estimated low income households for zip codes 23460 and 23461.There were no estimated residents age 25+ without a high school diploma for zip code 23459.*

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

Map 14: Total Deaths, 2011



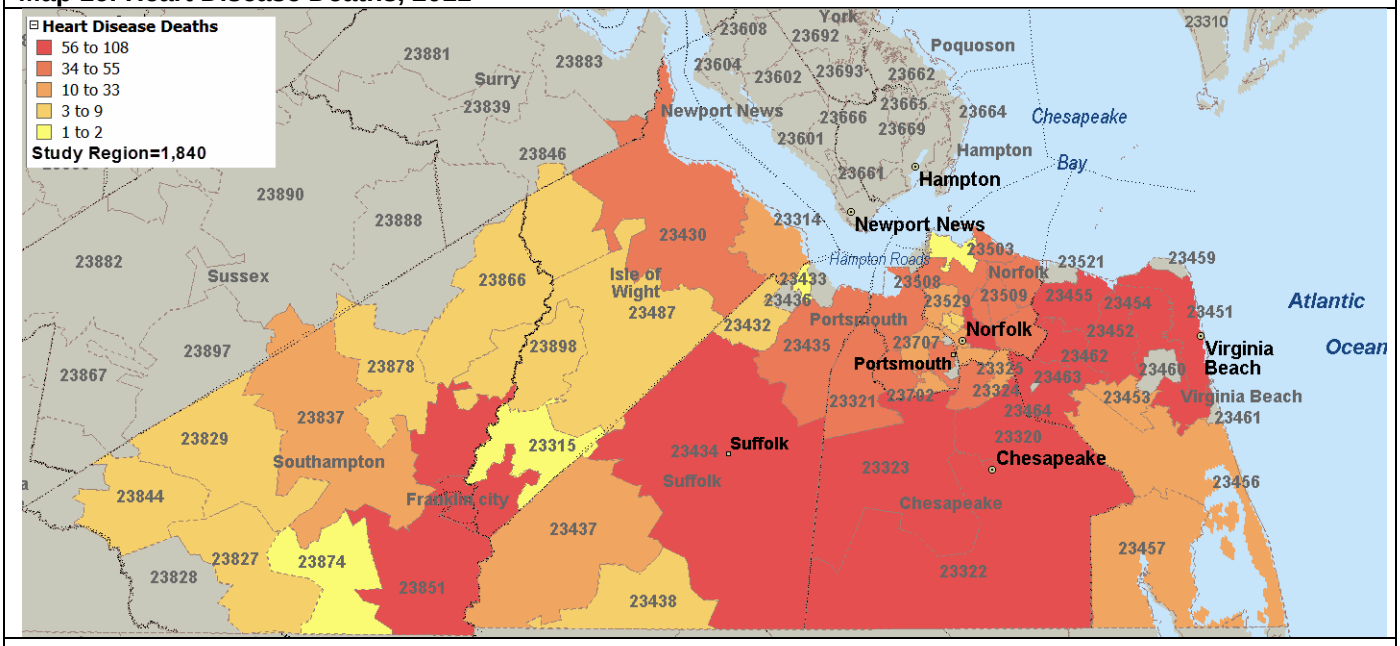
Map 15: Malignant Neoplasm (Cancer) Deaths, 2011*



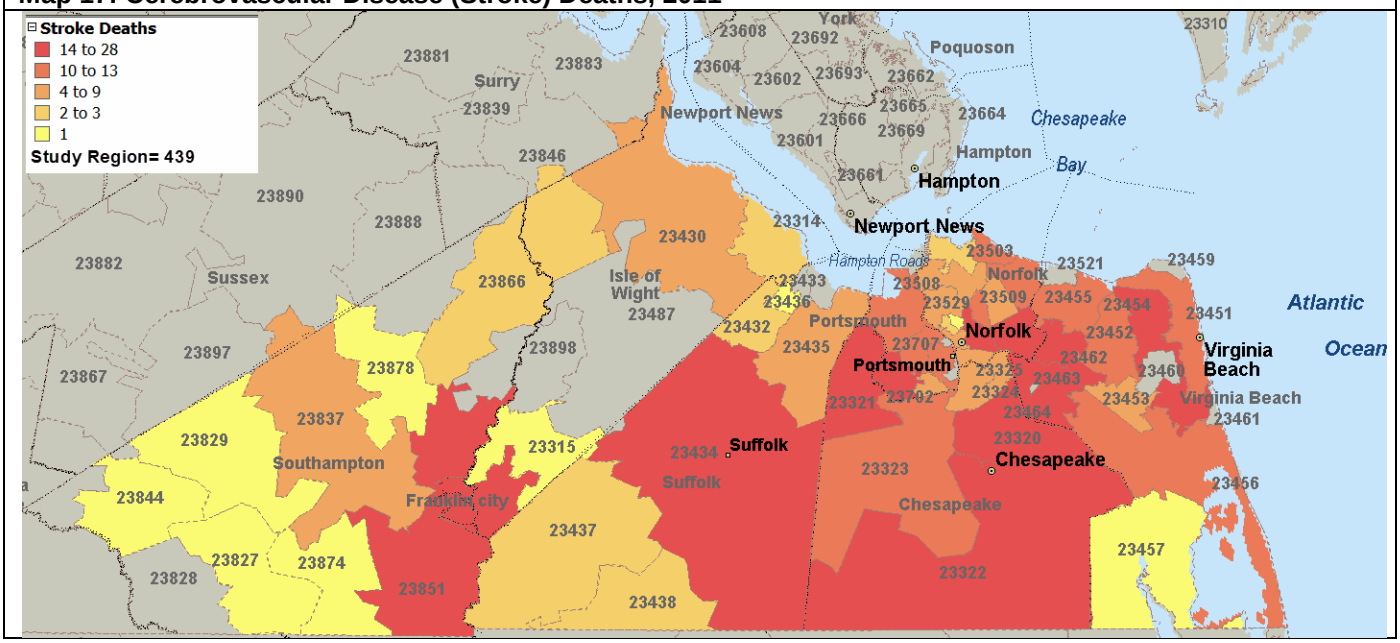
**There were no reported deaths for zip codes 23460 and 23463.There were no reported cancer deaths for zip codes 23436, 23459, 23460, 23463, 23511 and 23844.*

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

Map 16: Heart Disease Deaths, 2011*

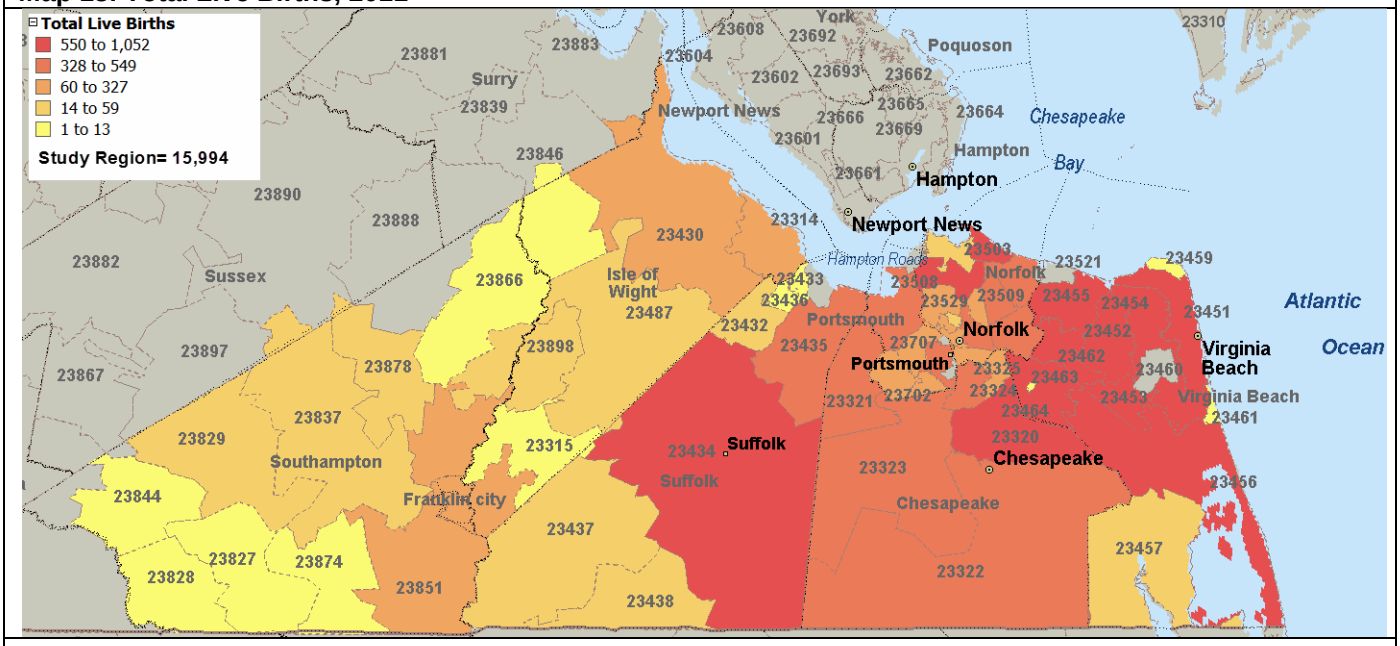


Map 17: Cerebrovascular Disease (Stroke) Deaths, 2011*

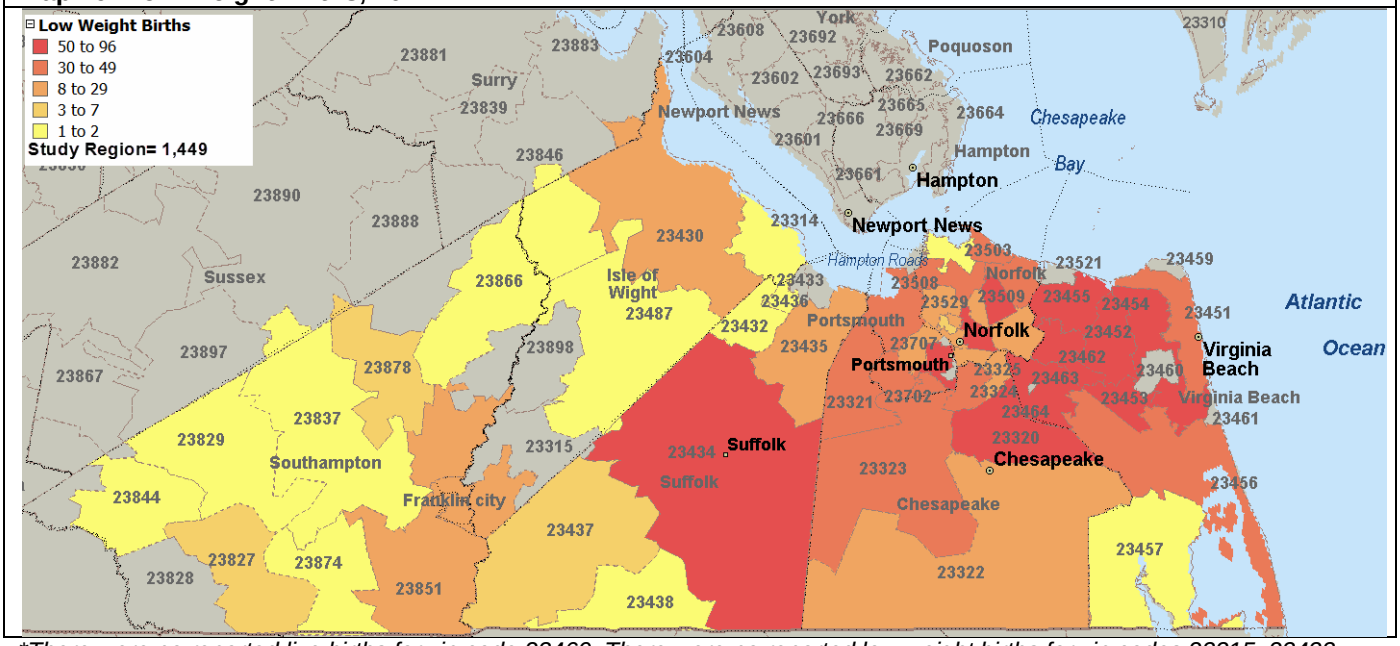


**There were no reported heart disease deaths for zip codes 23436, 23459, 23460, 23461, 23463 and 23828. There were no reported stroke deaths for zip codes 23433, 23459, 23461, 23460, 23463, 23487, 23828 and 23898.*
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix C. Data Sources for details.

Map 18: Total Live Births, 2011*



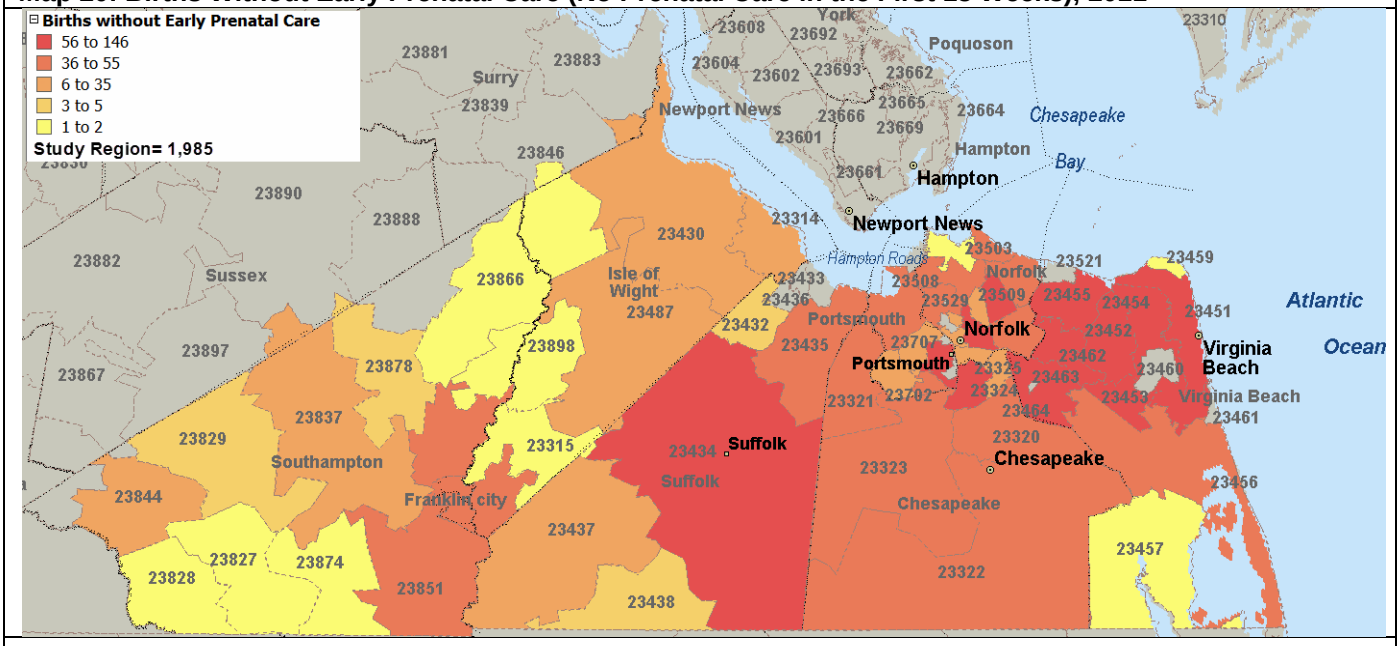
Map 19: Low Weight Births, 2011*



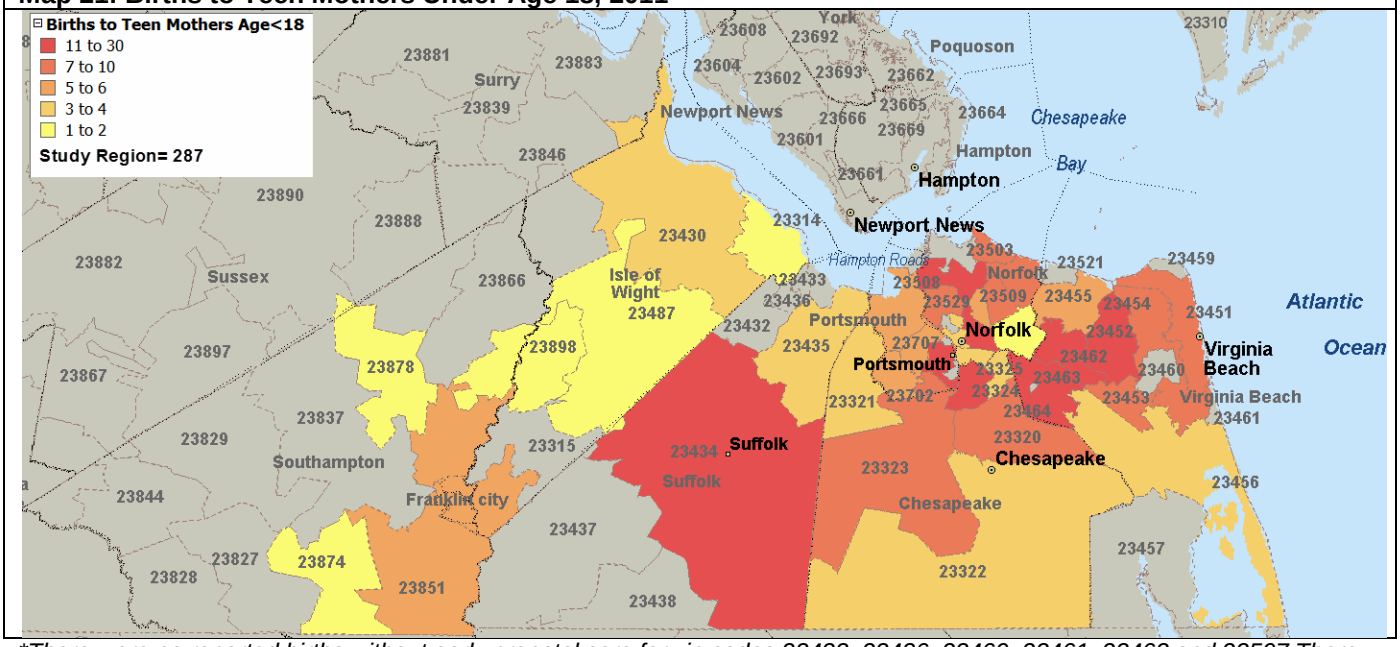
**There were no reported live births for zip code 23460. There were no reported low weight births for zip codes 23315, 23433, 23459, 23460, 23461, 23463, 23828 and 23898.*

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

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



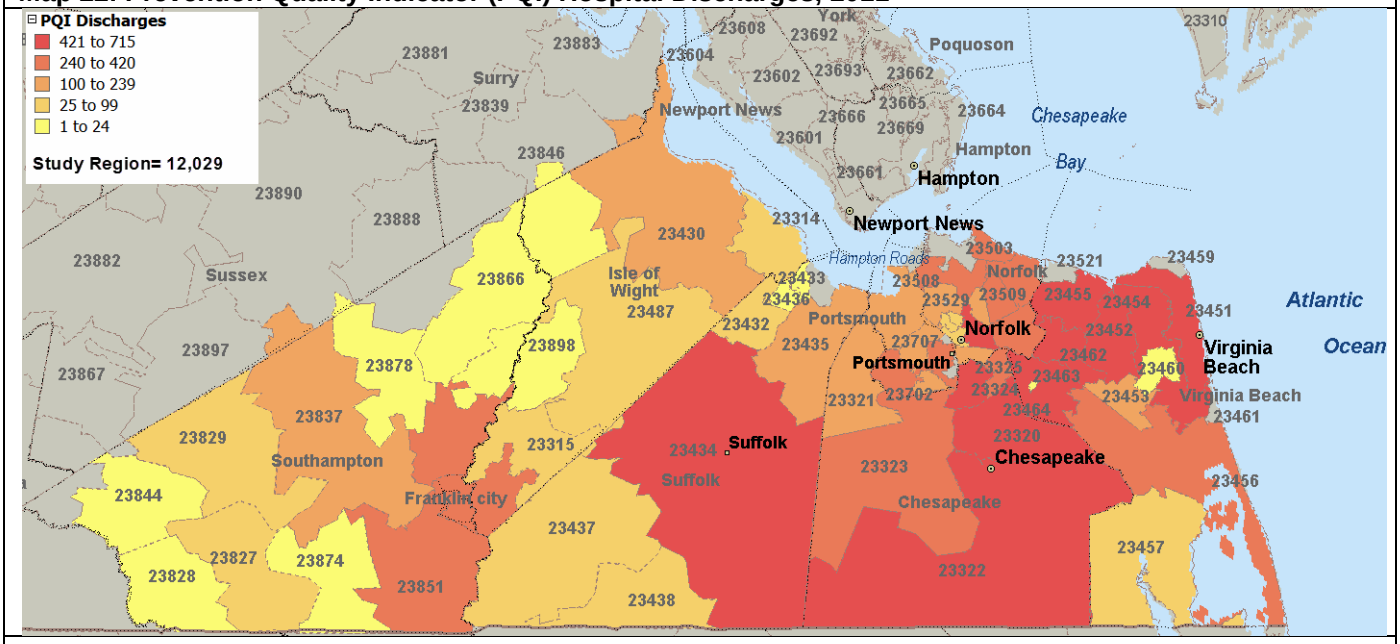
Map 21: Births to Teen Mothers Under Age 18, 2011*



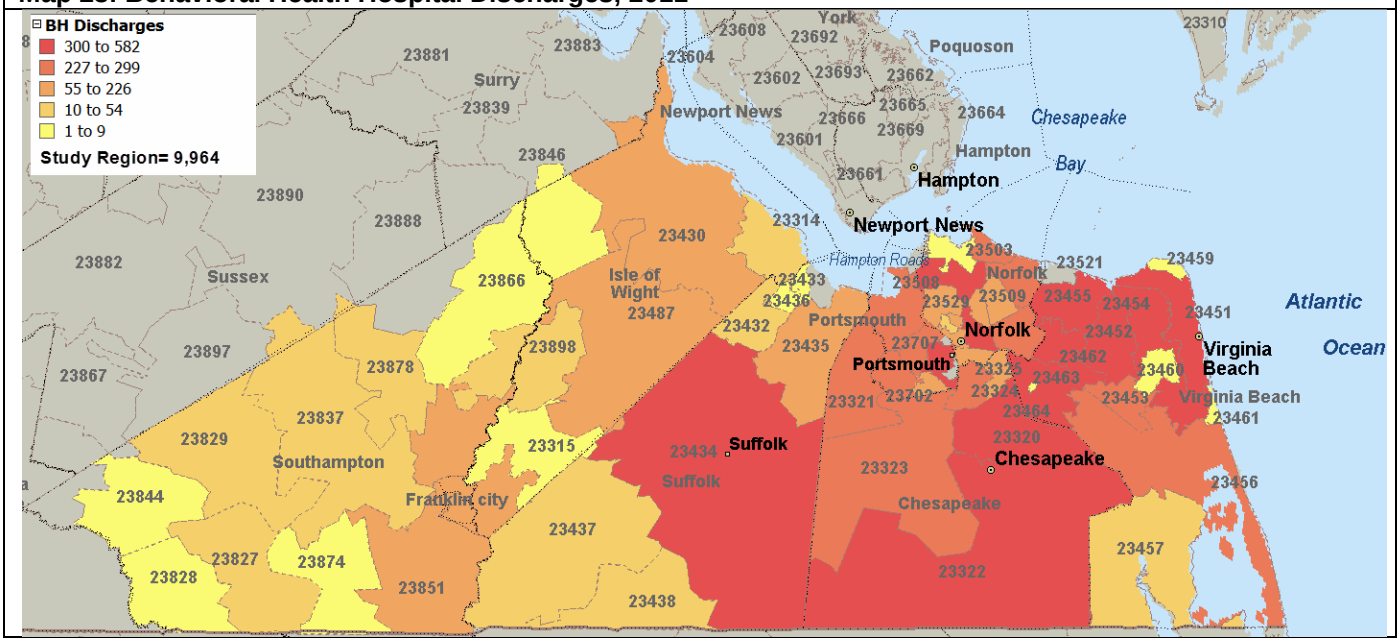
**There were no reported births without early prenatal care for zip codes 23433, 23436, 23460, 23461, 23463 and 23507.There were no reported births to teen mothers under age 18 for zip codes 23315, 23432, 23433, 23436, 23437, 23438, 23457, 23459, 23460, 23461, 23463, 23507, 23511, 23827, 23828, 23829, 23837, 23844 and 23866.*

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

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

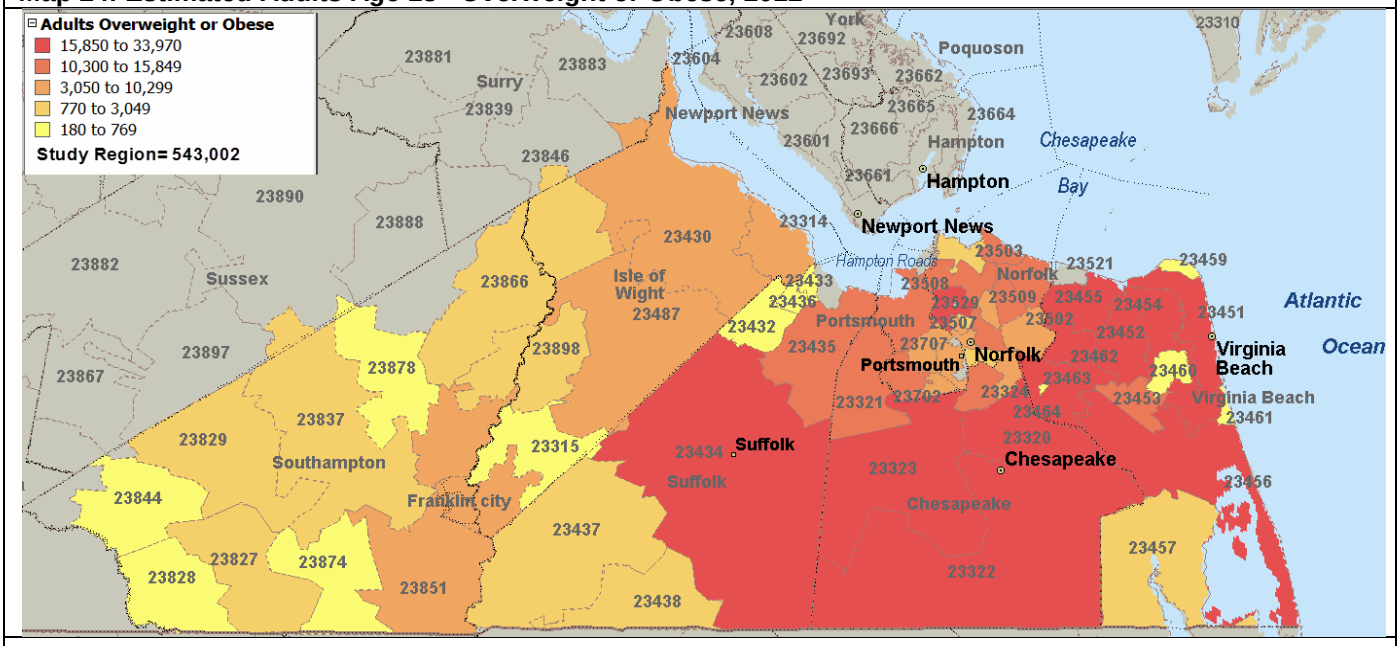


Map 23: Behavioral Health Hospital Discharges, 2011

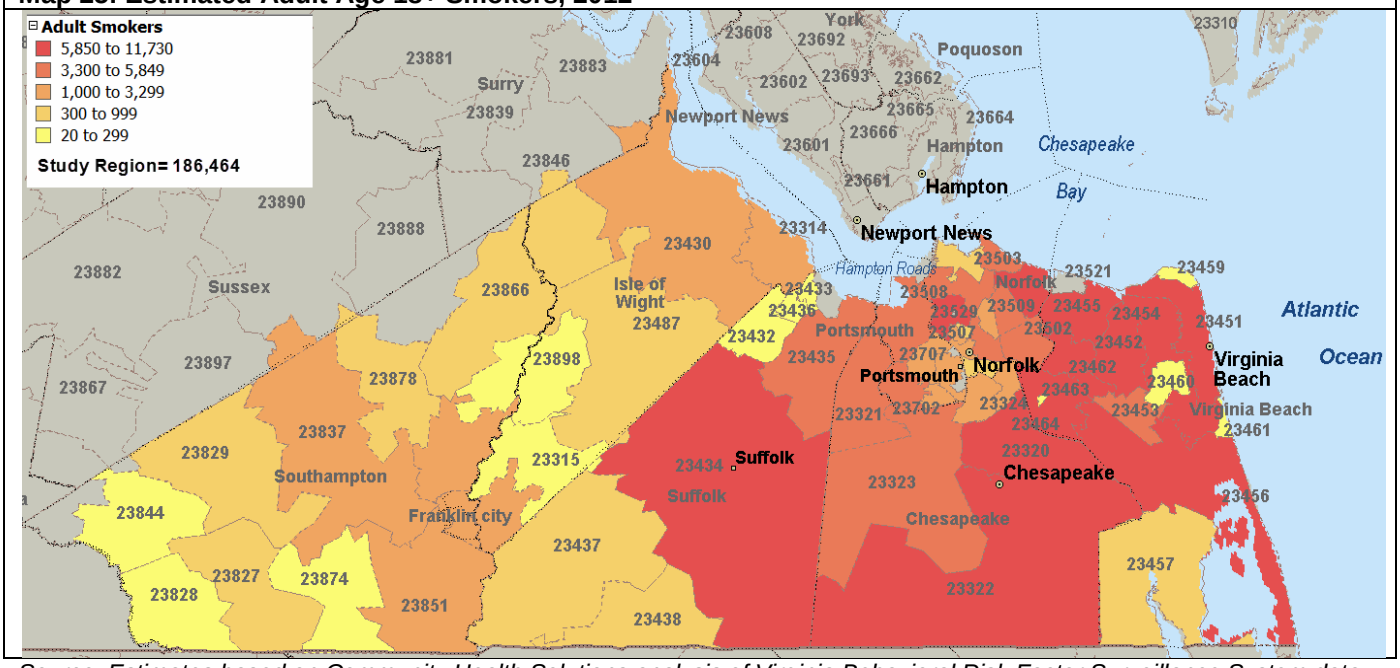


**There were no reported PQI discharges for zip codes 23459, 23511 and 23461.*
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information, Inc.
See Appendix C. Data Sources for details.

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

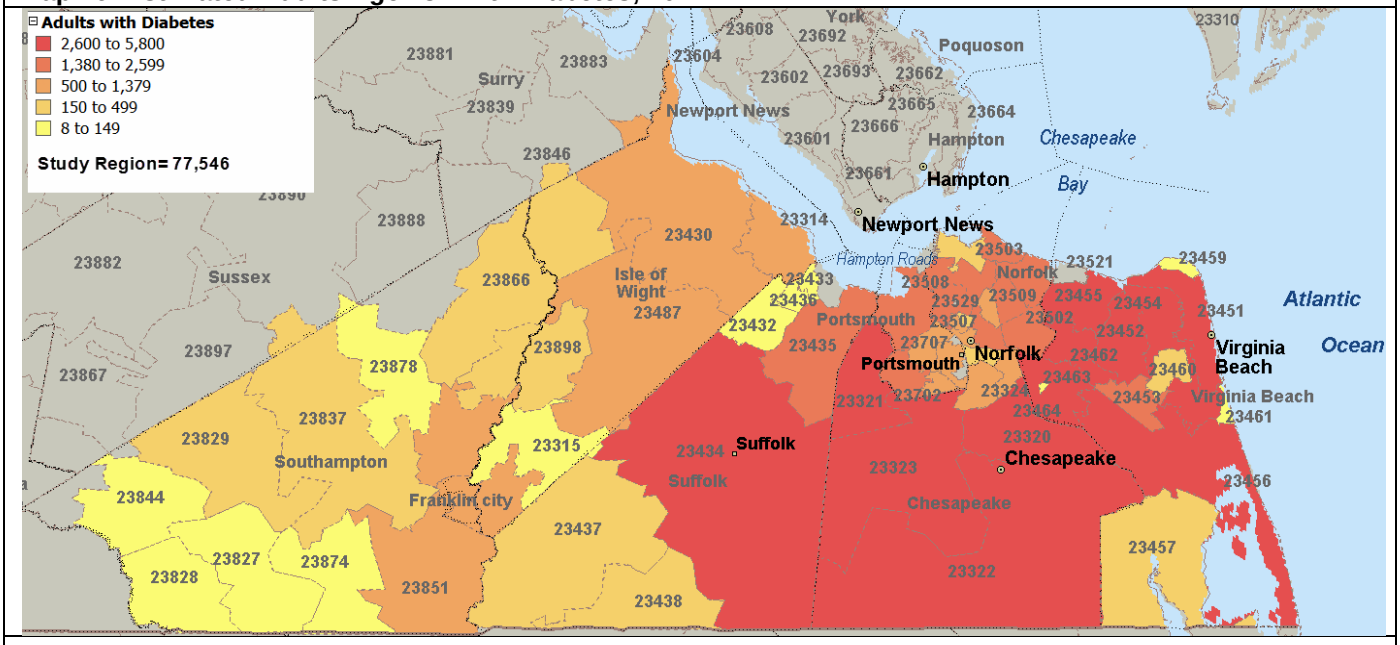


Map 25: Estimated Adult Age 18+ Smokers, 2012

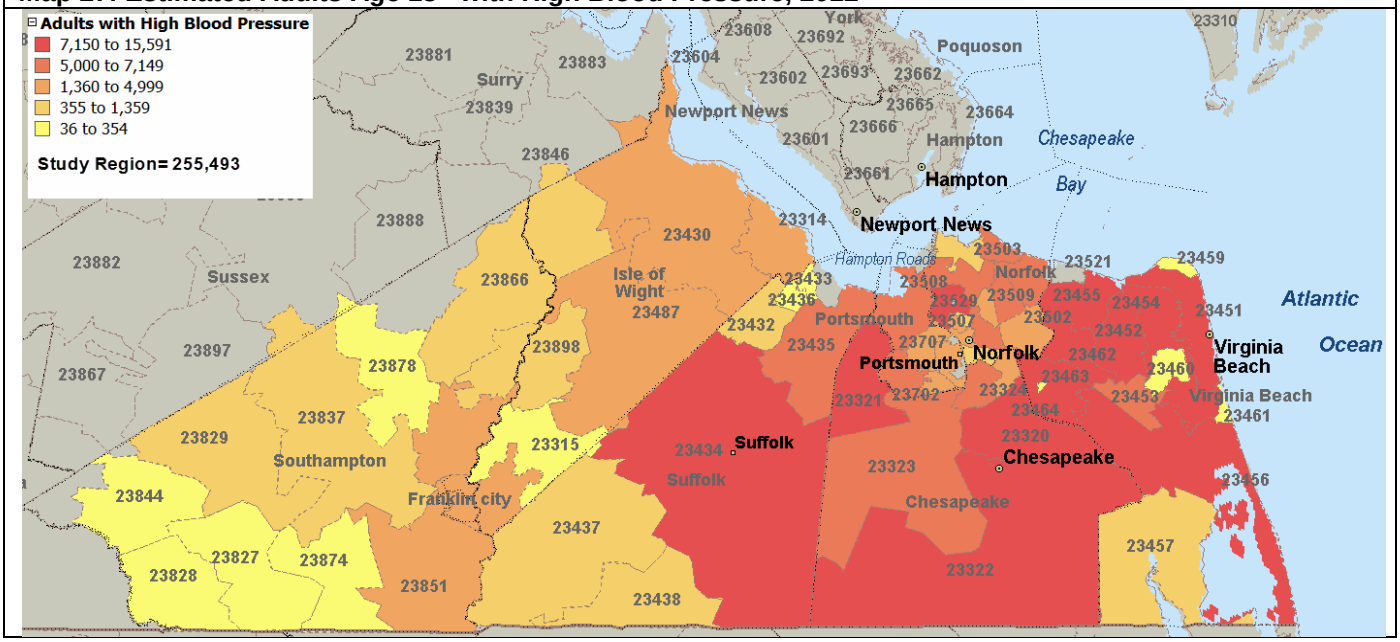


Source: Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

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

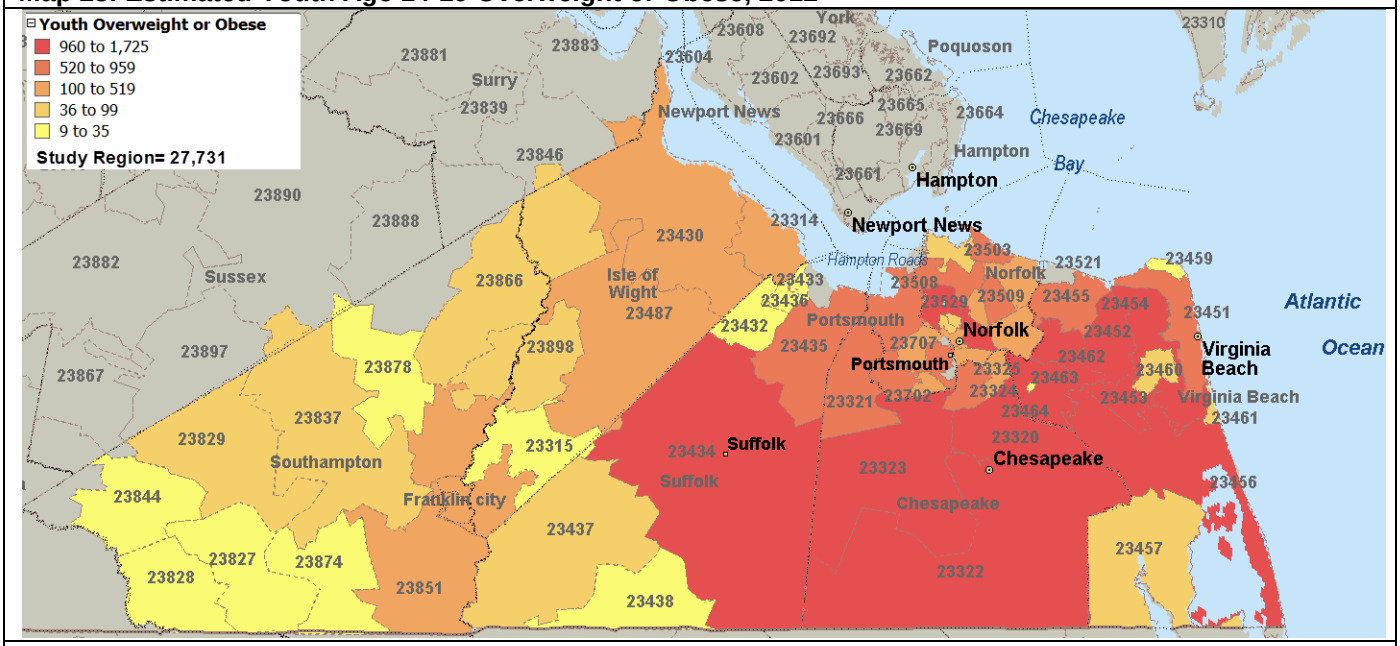


Map 27: Estimated Adults Age 18+ with High Blood Pressure, 2012

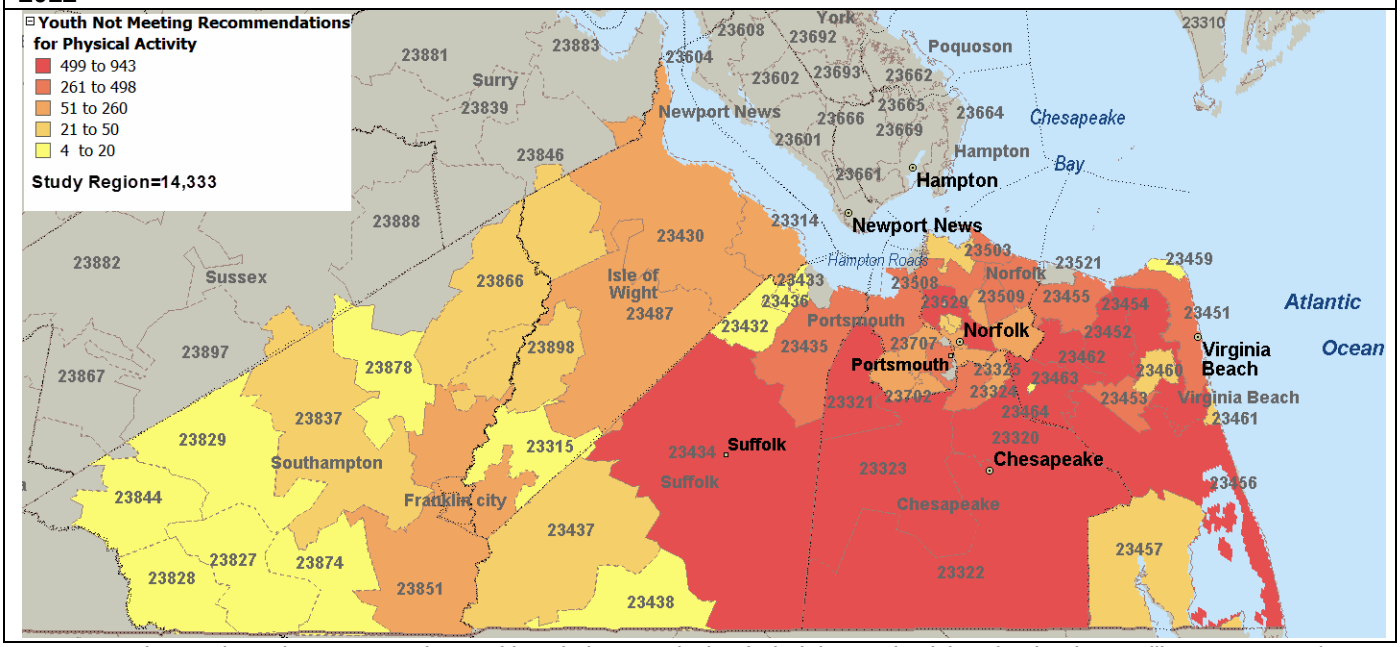


Source: Estimates based on Community Health Solutions analysis of Virginia Behavioral Risk Factor Surveillance System data and estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

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

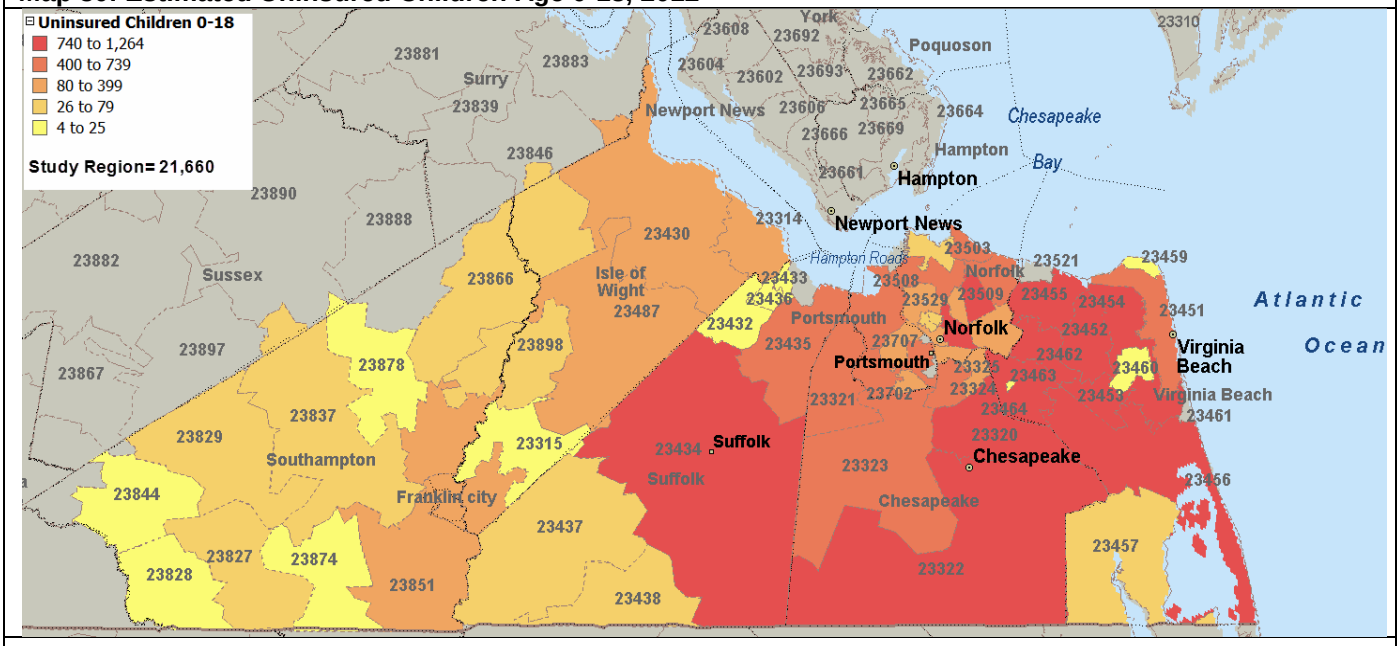


Map 29: Estimated Youth Age 14-19 Not Meeting Recommendations for Physical Activity in the Past Week, 2012

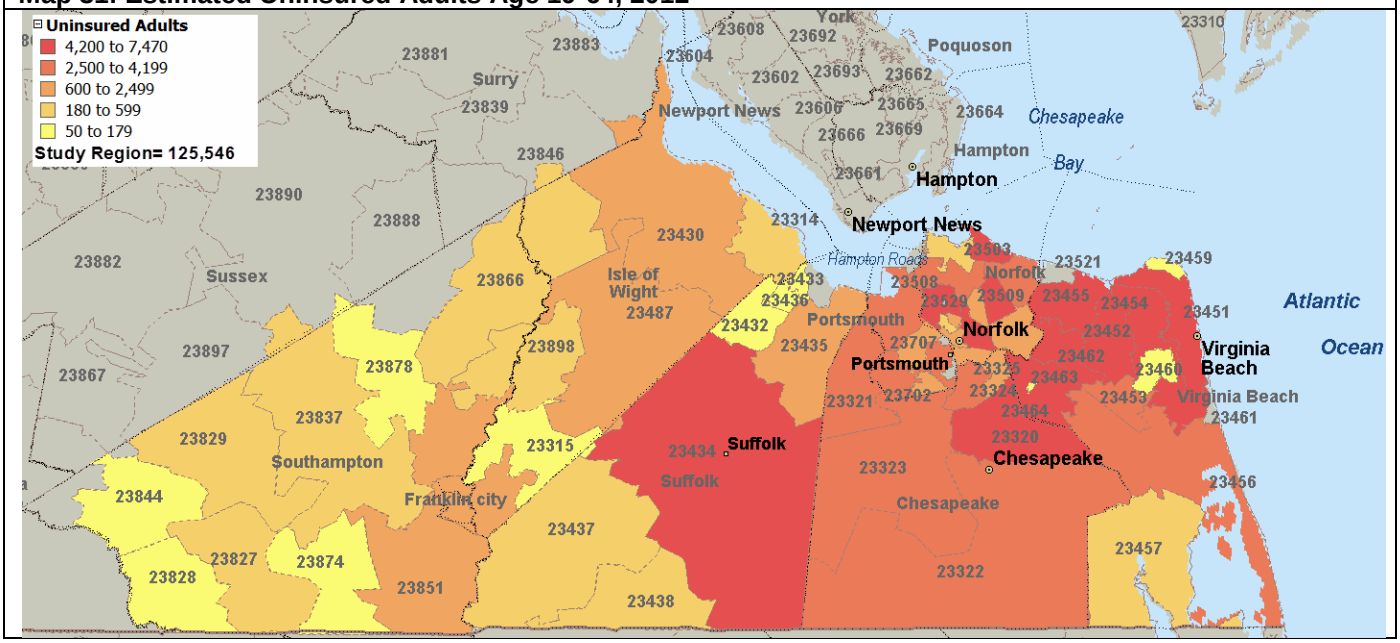


Source: Estimates based on Community Health Solutions analysis of Virginia Youth Risk Behavioral Surveillance System data and estimates from Alteryx, Inc. See Appendix C. Data Sources for details.

Map 30: Estimated Uninsured Children Age 0-18, 2012*



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



**There were no estimated uninsured children or adults for zip code 23461.*
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. See Appendix C. Data Sources for details.

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.

Response #	Responses
1	Access Partnership has had a wonderful collaboration with Sentara Hospitals since the organization was established. I wish it was as easy to work with other divisions (SMG) as it is to work with the hospital division.
2	Bring your bus to the Senior Center!
3	Charity care options for specialty care, radiology, pathology, etc. for patients receiving primary care in the community (and not enrolled in ACC).
4	Clear communication with our First Responders (EMT, E, I, P). Making sure everyone is on the same page through positive interaction concerning patient care.
5	• Collaborate with EVMS in preparing nurses/MAs for participation on highly effective teams in the patient-centered medical home. • Fund clinical investigators who are seeking to improve improved transitions of care/post-acute care. • Substantially increase support for the training of primary care physicians who make a valuable contribution to achieving the Triple Aim. • Support improved access to high quality dental care and mental health services, which together contribute substantially to poorer health in our region.
6	Continue to provide outreach to communities with "free" screenings for a variety of "health epidemics" obesity, hypertension, and diabetes.
7	Continue to support the mission of the Free Foundation, so that the mobility needs of the members of the community can be met.
8	Continue with partnerships; let us help you achieve your goals with community follow-up.
9	Demand that subspecialists (particularly of the surgical variety) assume primary admitting and discharging responsibilities for their hospitalized patients. The primary care hospitalist workforce is diluted by providing admitting services to subspecialties.
10	Developing a more robust community-oriented research capability that can track health status and the effectiveness of interventions in improving that status is important and should involve EVMS, ODU, and NSU faculty as appropriate.
11	Educating the public and providing access to care are most important; then we can tackle the problems of our population.
12	Expanding outreach into the community, developing community based interventions that address health disparities and collaborating with EVMS to study effectiveness would help Sentara achieve its mission.
13	• Focus more on programs outside the hospital walls. Prevention rather than clinical care is where we stand to gain the most ground against chronic, preventable diseases. • Engage more with the community and in neighborhoods of need to identify needs, develop plans and implement measures to improve health.
14	• Greater focus on Alzheimer's disease. • Access to care and health professional training. • It would be helpful to have a comprehensive GeroPsych unit providing specialized care and assessment for dementia. 1 out of 9, 65 years and older, will develop Alzheimer's disease.

Continued on next page…

APPENDIX B. Community Insight Profile- Additional Ideas and Suggestions for Improving Community Health (continued)

15	Hospital services, including: • Discharge planning; setting up post discharge appointments for patients before discharge and assessing safety prior to discharge • Better communications between doctors and families during hospitalization • Patient mobilization during hospitalization
16	I believe Sentara is cutting edge and provides our community high quality care.
17	Improving health is a continuum involving patients, staff, MDs, community and ancillary services. Outside looking in, I see Sentara as a leader in cutting edge health care to include new treatment modalities and expertise in up to date clinical practices. In the employee arena, I see room for improvement. Happy, well trained and educated employees exude their job satisfaction to the customers which in turn results in high patient satisfaction numbers. Not privy to the budget numbers and realizing that Sentara is a business and needs to operate in the positive I find the practice of “furloughing” employees when the census is down a policy that might bear further review. When an employee making $10.00/hr. is sent home four hours early, does that $40.00 really impact the general welfare of Sentara? Down time is a great opportunity for employees to perform other duties, bond and form relationships with colleagues that results in accountability and pride and gives a sense that they are in fact a valuable asset to Sentara. In difficult financial times $40 may really impact someone’s life. [If] Sentara goes the extra mile, the employee will in turn do the same.
18	• Increase staffing (nurses) on the floor. • Provide more mental health services. • Provide more community awareness and educational programs for childhood obesity prevention in consort with the local health departments.
19	Main concern is quality primary care
20	• One issue, which is not a community assessment issue, is Sentara's scheduling for procedures. Scheduling comes under the category of "customer service." Seniors, diabetics should be scheduled for procedures early in the morning. When a patient is scheduled, questions should be asked "is this an emergency, will any day do, etc." Some days schedules for procedures are heavy and the next day there aren’t sufficient patients to keep the staff busy for an entire day. • There should be a list of prerequisites to ensure the patient and family will have a positive visit to the hospitals.
21	• Readmission rates • Hospital medical errors, especially leading to death • Obesity in all ages and definitely among health care workers (they should be setting a good example)
22	Sentara can help achieve its mission by recognizing the value that the health department can add through collaboration and partnership to address the community's priority health issues.
23	Sentara needs to lead the way in funding and running an active community information and referral service. With the modern internet and social media, there is no reason recognition of a phone service and website that could help you locate what exists is widely known by all. This should be a priority. I admit to a bias in that I ran a community information and referral service and was President of the Alliance of Information and Referral Systems. Simply put, quality information and referral really changes a community. [respondent name]
24	Support free clinics on various topics in every city.
25	Support the work of free clinics in an even more robust manner. It is cost effective in preventing emergency room visits in addition to helping those in need.
26	The Community Health Center is very grateful for the continued support of Sentara in all of our activities.
27	There are so many people in all communities in the Hampton Roads area that need these services. Train health care workers to get into the communities and serve the people. Offer programs

Continued on next page…

28	There needs to be more communication about some of the wonderful services that Sentara offers. When my father was hospitalized at SHH in March of 2011 with CHF, no one told us about the Advanced Heart Failure clinic and the follow up options that are available. I found out about it from one of my faculty who has a strong back ground in cardiac. I called and got my father in and the services that the clinical and the NPs provided [staff names] were unbelievably wonderful. Both of them had very astute assessment skills and accurately diagnosed Dad on more than one occasion with issues that needed correction. I suppose I should have known about the clinic as well, but at the college we are removed from the clinical environment. It would have been helpful had the nurses shared that information with me before we left the hospital. With AHF being one of the clinical 3's that should be a critical piece that staff educate their CHF patients on. That is the only issue I ever found with the staff who were outstanding!
29	To the extent not already done, EHR sharing with all area providers.
30	• We are engaged in a Care Transitions pilot with Sentara Leigh using the Coleman model. The initial results show a decline in readmissions for the very limited number of patients who have participated. We think this pilot should be expanded to SNG, SVFG and SPA, in that order, using funds from the hospitals for the interventions. • We would also like to see greater linkages between the hospitals and Senior Services in support of chronic disease self-management community based classes. Thank you for the opportunity to respond.
31	We need to expand the community services so that care is provided where people live, work, play and worship. I think that faith-based partnerships could be expanded as well as expansion of partnerships with other school of health professions, particularly in the area of community outreach.
32	• We need to form partnerships in our community to assist with the increasing substance use disorders and lack of resources and I believe that we need to set up some medical detoxification services and substance use disorders ERs and psychiatric ERs to better manage the growing numbers of these populations. • Medical clearance for TDOs is problematic and some joint lobbying needs to occur with the State Legislature to change the laws.
33	Work collaboratively with public health leadership to ensure more comprehensive efforts to address community health improvement projects. Ensure inclusion for input at the planning stages.
34	Work more closely with all area safety net clinics to provide in-kind services for low-income uninsured individuals. More funding through the Sentara Health foundation for health safety net clinics.

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 (also Appendix A. Maps 1-13)	Community Health Solutions analysis of U.S. Census data and local demographic estimates from Alteryx, Inc. (2012 and 2017). 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 (2011). Locality level counts and rates were obtained from the Virginia Department of Health. The combined SNGH study region counts and rates, plus zip code-level counts were produced by Community Health Solutions.
4) Maternal and Infant Health Profile (also Appendix A. Maps 18-21)	Community Health Solutions analysis of Virginia Department of Health death record data (2011). Locality level counts and rates were obtained from the Virginia Department of Health. The combined SNGH study region counts and rates, plus zip code-level counts were produced by Community Health Solutions.
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 demographic 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+ 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. (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. Differences between local rates and state rates may reflect estimation error rather than valid differences.

8) Youth Health Risk Factor Profile (also Appendix A. Maps 28)	Estimates of risk behaviors for children age 14-19 were produced by Community Health Solutions using: • Data from the 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 • Local demographic 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. Differences between local rates and state rates may reflect estimation error rather than valid differences.
9) Uninsured Profile (also Appendix A. Maps 30-31)	Estimates of uninsured nonelderly age 0-64 were produced by Community Health Solutions using: • *The Profile of the Uninsured* report produced for Virginia Health Care Foundation by the Urban Institute (2011) • Local demographic 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. Differences between local rates and state rates may reflect estimation error rather than valid differences.
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/.