Obici Ambulatory Surgery Center
Community Health Needs Assessment
2016

SENTARA®

Obici Ambulatory Surgery Center

2016 Community Health Needs Assessment

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I. INTRODUCTION

Obici Ambulatory Surgery Center has conducted a community health needs assessment in collaboration with Sentara Obici Hospital. 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 social factors are important determinants of health. The assessment also looks at risk factors like obesity and smoking and at health indicators such as infant mortality and preventable hospitalizations. Community input is important so the assessment also includes survey results from key stakeholders including public health, social services, service providers, and those who represent underserved populations. The report also includes findings from focus groups with community members on health issues and barriers to achieving good health.

The needs assessment identifies numerous health issues that our communities face. Considering factors such as size and scope of the health problem, the severity and intensity of the problem, the feasibility and effectiveness of possible interventions, health disparities associated with the need, the importance the community places on addressing the need, and consistency with our mission "to improve health every day", we have identified a number of priority health problems in our area to address in our implementation strategy:

- Dental/ Oral Health Services
- Substance Abuse Services
- Health Care Insurance Coverage
- Obesity/ Nutrition/ Fitness
- Heart Disease

Our previous Community Health Needs Assessment also identified a number of health issues. An implementation strategy was developed to address these problems. The hospital has tracked progress on the implementation activities in order to evaluate the impact of these actions. The implementation progress report is available in the Appendix.

Obici Ambulatory Surgery Center works with a number of community partners to address health needs. Information on available 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!

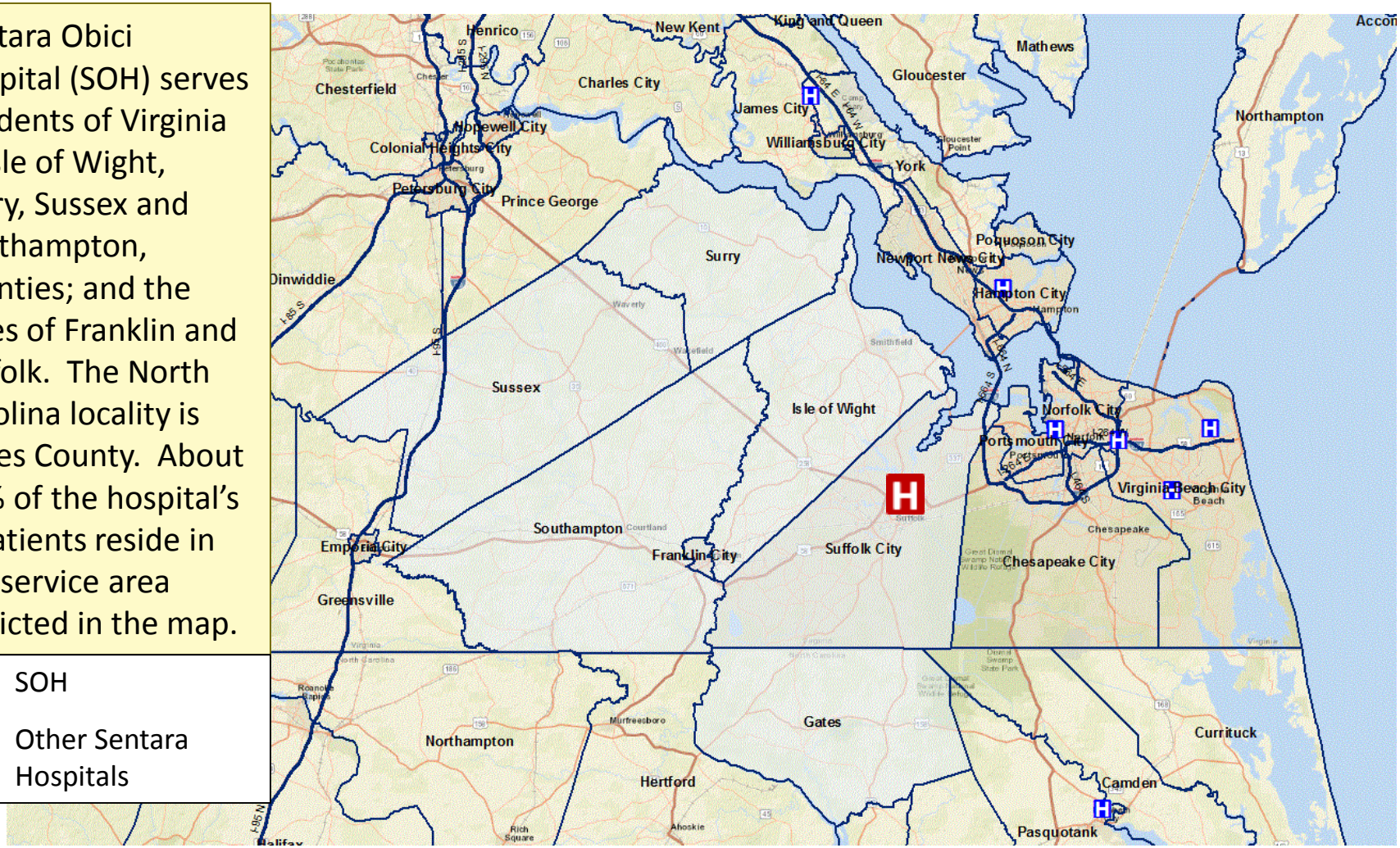
Sentara Obici Hospital (SOH) 2016 Community Health Needs Assessment

Community Description

Community Description

Sentara Obici Hospital Service Area

Sentara Obici Hospital (SOH) serves residents of Virginia in Isle of Wight, Surry, Sussex and Southampton, counties; and the cities of Franklin and Suffolk. The North Carolina locality is Gates County. About 83% of the hospital's inpatients reside in the service area depicted in the map.



Area-wide Key Demographic Characteristics

DEMOGRAPHIC CHARACTERISTICS	Selected Area	Virginia	USA
2010 Total Population	174,228	8,001,038	308,745,538
2016 Total Population	178,253	8,428,339	322,431,073
2021 Total Population	183,376	8,801,874	334,341,965
% Change 2016 - 2021	2.9%	4.4%	3.7%
Median Household Income	$58,570	$ 65,624	$ 55,072

POPULATION DISTRIBUTION			Age Distribution			
Age Group	2016	% of Total	2021	% of Total	Virginia 2016 % of Total	USA 2016 % of Total
0-14	32,571	18.3%	31,512	17.2%	18.5%	19.0%
15-17	7,153	4.0%	7,418	4.0%	3.8%	4.0%
18-24	15,405	8.6%	16,650	9.1%	10.0%	9.8%
25-34	21,147	11.9%	22,021	12.0%	13.6%	13.3%
35-54	48,298	27.1%	44,662	24.4%	26.8%	26.0%
55-64	25,502	14.3%	27,934	15.2%	12.9%	12.8%
65+	28,177	15.8%	33,179	18.1%	14.4%	15.1%
Total	**178,253**	**100.0%**	**183,376**	**100.0%**	**100.0%**	**100.0%**

EDUCATION LEVEL	Education Level Distribution			
2016 Adult Education Level	Pop Age 25+	% of Total	Virginia 2016 % of Total	USA % of Total
Less than High School	6,473	5.3%	4.8%	5.8%
Some High School	12,063	9.8%	7.0%	7.8%
High School Degree	37,175	30.2%	25.0%	27.9%
Some College/Assoc. Degree	39,463	32.1%	27.3%	29.2%
Bachelor's Degree or Greater	27,950	22.7%	35.8%	29.4%
Total	**123,124**	**100.0%**	**100.0%**	**100.0%**

- **The area's 2016 total population is 178,253 with projected growth of 2.9% over the next five years.**
  - Virginia and the U.S. are expected to grow at a faster rate of 4.4 % and 3.7%.
- **The median household income ($58,570)** is lower than the state, but higher than the U.S. median income.
- **The 55-64 and 65+ age cohorts** combined (30.1%) is a great percent of the population compared to those age cohorts for Virginia (27.3%) and the U.S (27.9%).
- **15.1% of the population age 25+ has only some high school education or less**, which is a higher percent than Virginia (11.8%) and the U.S. (13.6%).

Area-wide Key Demographic Characteristics, Cont.

- **The projected growth of females, child bearing age (15-44) is 1.7%,** which is higher than the state (1.3%) and the U.S. (1.5%).
- **19.8% of the population has a household income below $25,000.**
  - This is slightly higher than Virginia (17.9%), but lower than the U.S. (22.7%).
  - 200% of the current Federal Poverty Level for a family of four is $48,600.
- **38.2% of the population is Black Non-Hispanic and 54.7% White Non-Hispanic.**
  - The percent Black non-Hispanic population is larger than that of Virginia (18.9%) and the US (12.3%).

DEMOGRAPHIC CHARACTERISTICS

	2016	2021	% Change	Virginia % Change	USA % Change
Total Male Population	87,994	90,546	2.9%	4.5%	3.8%
Total Female Population	90,259	92,830	2.8%	4.4%	3.6%
Females, Child Bearing Age (15-44)	31,842	32,380	1.7%	1.3%	1.5%

HOUSEHOLD INCOME DISTRIBUTION

	Income Distribution			
2016 Household Income	HH Count	% of Total	Virginia % of Total	USA % of Total
<$15K	7,063	10.7%	9.6%	12.3%
$15-25K	6,026	9.1%	8.3%	10.4%
$25-50K	16,096	24.3%	20.8%	23.4%
$50-75K	12,108	18.3%	17.6%	17.6%
$75-100K	9,239	13.9%	12.6%	12.0%
Over $100K	15,773	23.8%	31.1%	24.3%
Total	**66,305**	**100.0%**	**100.0%**	**100.0%**

RACE/ETHNICITY

	Race/Ethnicity Distribution			
Race/Ethnicity	2016 Pop	% of Total	Virginia % of Total	USA % of Total
White Non-Hispanic	97,543	54.7%	62.5%	61.3%
Black Non-Hispanic	68,130	38.2%	18.9%	12.3%
Hispanic	5,921	3.3%	9.2%	17.8%
Asian & Pacific Is. Non-Hispanic	2,307	1.3%	6.3%	5.4%
All Others	4,352	2.4%	3.1%	3.1%
Total	**178,253**	**100.0%**	**100.0%**	**100.0%**

City and County Data

Area	Population and Age							
	2016 Population	Projected 2016-2021 % Change in Total Pop.	2016 % of Total Pop. that is age 65+	Projected 2016-2021 % Change in Pop. age 65+	2016 % of Total Pop. that is age 0-17	Projected 2016-2021 % Change in Pop. age 0-17	2016 % of Female Pop. that is age 15-44	Projected 2016-2021 % Change in Female Pop. age 15-44
Gates	11,457	-2.3%	18.5%	11.7%	20.9%	-9.4%	32.6%	-1.7%
Isle of Wight	36,435	3.5%	18.1%	19.5%	20.2%	-4.9%	32.5%	2.4%
Southampton	18,177	0.0%	18.5%	12.5%	18.8%	-7.0%	33.5%	0.8%
Surry	6,807	-1.0%	19.7%	12.1%	18.4%	-6.1%	31.3%	-0.6%
Sussex	11,801	-0.1%	16.6%	10.0%	16.0%	-0.6%	30.4%	-0.1%
Franklin city	8,522	1.1%	18.2%	9.7%	26.1%	4.2%	33.4%	0.3%
Suffolk city	89,015	4.5%	13.6%	21.6%	24.6%	0.1%	37.9%	2.3%
Total	182,214	2.8%	15.9%	17.5%	22.2%	-2.0%	35.2%	1.7%
Virginia	8,428,339	4.4%	14.4%	20.2%	22.3%	2.0%	39.2%	1.3%
United States	322,431,073	3.7%	15.1%	17.6%	23.0%	0.9%	38.7%	1.5%

- Total population for the service region (2.8%) is expected to grow at a slower pace than Virginia (4.4%) and the U.S. (3.7%). Gates county, NC, Surry and Sussex counties are projected to decline in total population by 2021.
- Isle of Wight county and Suffolk city residents that are age 65+ are expected to grow at a faster rate than the total service area and the U.S.
- The pediatric population for the service area is projected to decline by -2.0% over the next five years. Two cities in the service area, projected to have an increase in the pediatric populations, are Franklin and Suffolk cities.
- Females of childbearing age (15-44) in Isle of Wight and Suffolk city are expected to increase faster than the overall service area, the state and the U.S.

City and County Data, Cont.

Area	Race and Ethnicity			Income and Education	
	2016 % of Pop.: Black, Non-Hispanic	2016 % of Pop.: Asian, Non-Hispanic	2016 % of Pop.: Hispanic Ethnicity (Any Race)	% of Households with Income Below $25,000	% of Pop age 25+ that did not Graduate from High School
Gates	32.5%	0.2%	2.2%	26.1%	16.7%
Isle of Wight	23.2%	1.1%	2.9%	19.5%	13.8%
Southampton	35.6%	0.3%	1.6%	25.0%	21.6%
Surry	43.1%	0.4%	2.2%	21.6%	21.7%
Sussex	56.7%	0.4%	2.6%	28.5%	29.3%
Franklin city	55.2%	1.0%	2.7%	40.8%	20.1%
Suffolk city	42.1%	1.8%	4.2%	14.8%	11.4%
Total	38.7%	1.2%	3.3%	19.9%	15.3%
Virginia	18.9%	6.3%	9.2%	17.9%	11.8%
United States	12.3%	5.4%	17.8%	22.7%	12.8%

- This region has a high percent of African American, Non-Hispanic residents compared to Virginia and the U.S., with Sussex county and Franklin city having the largest percent (56.7% and 55.2% respectively) within the service area.
- The area is less diverse for the Asian, Non-Hispanic and Hispanic populations than the state and the US.
- Franklin City has the greater percent of households with lower income levels below $25,000 at 40.8%.
- Sussex county had the largest percent of population age 25 and older that has only an elementary school education within the region.

Key Demographic Data by ZIP

City/County	Zip Code	Zip City	Total Population 2016	Total Population 2021	% Change 2016-2021	% of Pop Age 65+ 2016	% of Pop Age 65+ 2021	Pop Density / Sq Mile	% of Households with Income Below $25,000	% of Pop age 25+ that did not Graduate from High School	% of Service Area Pop
Isle of Wight	23314	Carrollton	7,861	8,549	8.8%	16.2%	19.2%	386	10.6%	11.1%	4.4%
Isle of Wight	23315	Carrsville	1,392	1,392	0.0%	17.5%	21.1%	45	18.6%	15.9%	0.8%
Isle of Wight	23430	Smithfield	17,907	18,462	3.1%	18.9%	21.6%	167	21.3%	12.5%	10.0%
Suffolk city	23432	Suffolk	1,380	1,362	-1.3%	21.5%	24.2%	101	13.3%	9.5%	0.8%
Suffolk city	23433	Suffolk	1,404	1,526	8.7%	24.9%	28.3%	732	15.4%	5.5%	0.8%
Suffolk city	23434	Suffolk	49,168	50,851	3.4%	14.0%	16.1%	234	18.8%	13.3%	27.6%
Suffolk city	23435	Suffolk	29,660	31,743	7.0%	10.6%	12.9%	797	8.3%	8.3%	16.6%
Suffolk city	23436	Suffolk	1,106	1,213	9.7%	19.5%	24.0%	396	10.0%	5.1%	0.6%
Suffolk city	23437	Suffolk	4,205	4,192	-0.3%	18.5%	22.1%	41	14.7%	12.5%	2.4%
Suffolk city	23438	Suffolk	1,850	1,911	3.3%	17.0%	19.7%	46	12.1%	13.6%	1.0%
Isle of Wight	23487	Windsor	6,338	6,371	0.5%	18.6%	21.2%	66	24.6%	18.3%	3.6%
Southampton	23827	Boykins	1,375	1,336	-2.8%	20.7%	22.5%	27	38.3%	32.6%	0.8%
Southampton	23828	Branchville	338	327	-3.3%	20.7%	22.6%	9	40.0%	34.5%	0.2%
Southampton	23829	Capron	2,590	2,613	0.9%	14.9%	15.9%	36	26.2%	35.2%	1.5%
Southampton	23837	Courtland	4,143	4,149	0.1%	20.2%	22.6%	38	23.6%	16.8%	2.3%
Surry	23839	Dendron	800	796	-0.5%	19.9%	22.0%	31	18.0%	18.8%	0.4%
Southampton	23844	Drewryville	611	594	-2.8%	19.5%	21.5%	14	42.5%	31.0%	0.3%
Surry	23846	Elberon	802	792	-1.2%	20.4%	23.0%	19	18.1%	19.2%	0.4%
Franklin city	23851	Franklin	13,818	13,887	0.5%	18.2%	20.1%	119	34.3%	18.9%	7.8%
Southampton	23866	Ivor	2,316	2,357	1.8%	18.6%	21.9%	25	18.3%	16.1%	1.3%
Southampton	23874	Newsoms	1,001	990	-1.1%	18.2%	20.7%	23	26.3%	18.1%	0.6%
Southampton	23878	Sedley	1,180	1,193	1.1%	18.1%	19.9%	28	19.3%	16.2%	0.7%
Surry	23881	Spring Grove	2,505	2,524	0.8%	20.2%	22.3%	19	23.7%	22.0%	1.4%
Surry	23883	Surry	2,243	2,225	-0.8%	18.5%	21.2%	46	21.2%	19.8%	1.3%
Sussex	23888	Wakefield	2,167	2,157	-0.5%	19.4%	21.7%	23	26.7%	21.7%	1.2%
Sussex	23890	Waverly	6,388	6,405	0.3%	14.1%	15.4%	33	29.7%	32.6%	3.6%
Isle of Wight	23898	Zuni	2,134	2,146	0.6%	16.9%	19.9%	50	19.0%	17.5%	1.2%
Gates	27926	Corapeake	1,918	1,885	-1.7%	18.4%	20.9%	33	21.6%	17.9%	1.1%
Gates	27935	Eure	1,505	1,452	-3.5%	16.6%	19.6%	26	27.6%	15.9%	0.8%
Gates	27937	Gates	4,024	3,953	-1.8%	16.2%	19.4%	46	25.1%	16.9%	2.3%
Gates	27938	Gatesville	1,376	1,340	-2.6%	22.2%	24.8%	31	29.3%	16.3%	0.8%
Gates	27946	Hobbsville	1,097	1,071	-2.4%	22.7%	25.5%	32	32.2%	18.0%	0.6%
Gates	27979	Sunbury	1,651	1,612	-2.4%	20.0%	21.7%	25	26.6%	15.9%	0.9%
Total SOH Service Area			178,253	183,376	2.9%	15.8%	18.1%	81	19.7%	15.1%	
Virginia			8,428,339	8,801,874	4.4%	14.4%	16.6%	213.8	17.9%	11.8%	
USA			322,431,073	334,341,965	3.7%	15.1%	17.1%	91.4	22.7%	12.8%	

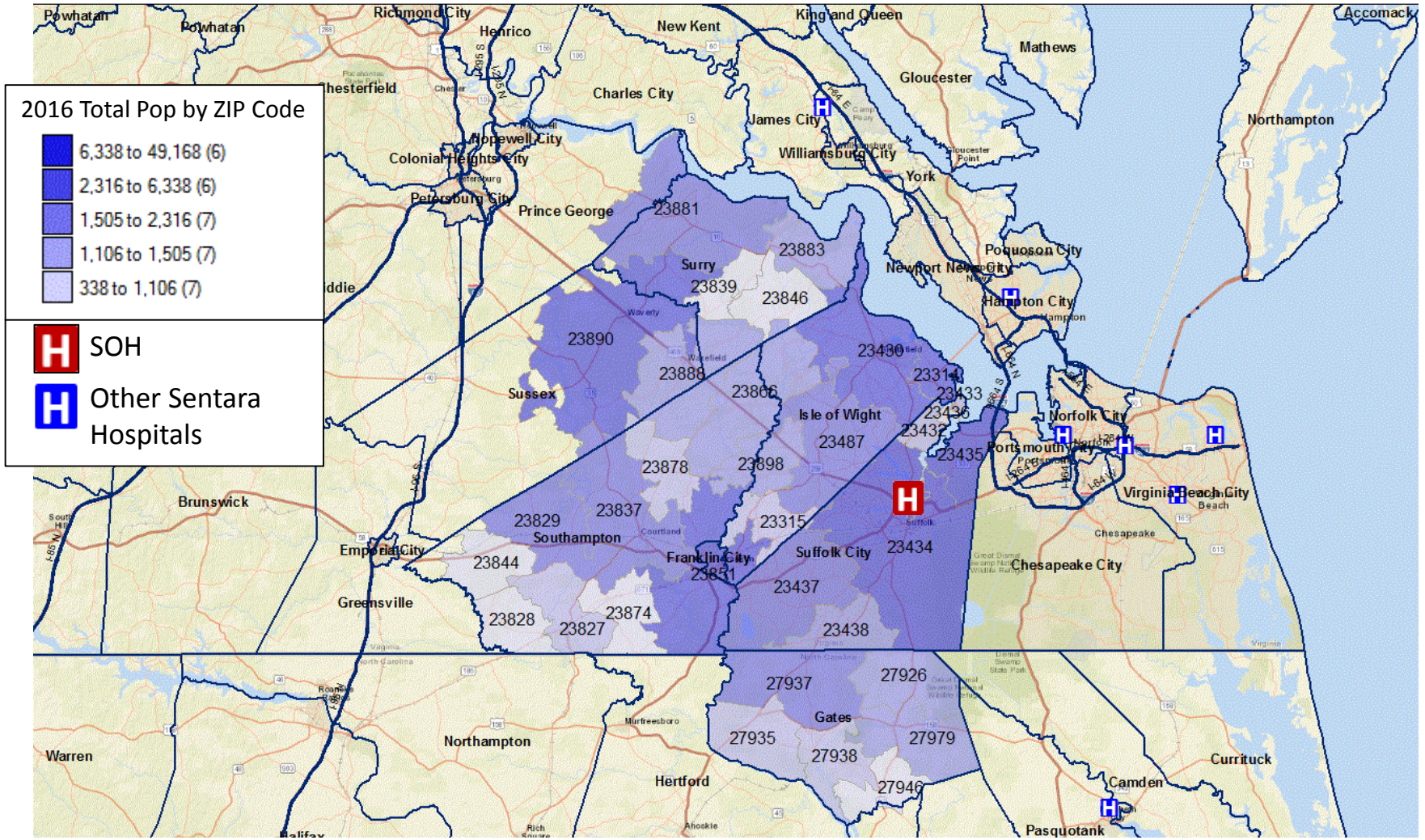
Source: Truven/Market Expert

Race & Ethnicity by ZIP

City/County	Zip Code	Zip City	Total Pop 2016	Total Pop 2021	% White NonHisp	% Black NonHisp	% Hispanic	% Asian NonHisp	% Other NonHisp
Isle of Wight	23314	Carrollton	7,861	8,549	70.7%	20.0%	3.8%	1.9%	3.7%
Isle of Wight	23315	Carrsville	1,392	1,392	78.5%	17.4%	1.6%	0.7%	1.8%
Isle of Wight	23430	Smithfield	17,907	18,462	67.4%	26.5%	2.8%	1.0%	2.3%
Suffolk city	23432	Suffolk	1,380	1,362	56.4%	38.7%	2.0%	0.9%	2.0%
Suffolk city	23433	Suffolk	1,404	1,526	87.2%	6.7%	3.0%	1.4%	1.7%
Suffolk city	23434	Suffolk	49,168	50,851	43.4%	49.9%	3.5%	0.9%	2.3%
Suffolk city	23435	Suffolk	29,660	31,743	51.0%	36.2%	5.9%	3.5%	3.4%
Suffolk city	23436	Suffolk	1,106	1,213	80.8%	11.8%	3.5%	2.3%	1.6%
Suffolk city	23437	Suffolk	4,205	4,192	71.6%	23.7%	1.9%	0.5%	2.3%
Suffolk city	23438	Suffolk	1,850	1,911	78.4%	16.9%	1.9%	0.5%	2.4%
Isle of Wight	23487	Windsor	6,338	6,371	75.2%	19.4%	2.7%	0.7%	2.0%
Southampton	23827	Boykins	1,375	1,336	48.1%	48.3%	2.2%	0.2%	1.2%
Southampton	23828	Branchville	338	327	46.4%	50.0%	2.1%	0.0%	1.5%
Southampton	23829	Capron	2,590	2,613	48.8%	48.1%	1.4%	0.2%	1.5%
Southampton	23837	Courtland	4,143	4,149	65.3%	31.4%	1.3%	0.3%	1.7%
Surry	23839	Dendron	800	796	54.1%	40.9%	3.0%	0.4%	1.6%
Southampton	23844	Drewryville	611	594	45.5%	48.6%	2.1%	0.0%	3.8%
Surry	23846	Elberon	802	792	57.1%	39.4%	1.4%	0.4%	1.7%
Franklin city	23851	Franklin	13,818	13,887	45.5%	48.7%	2.4%	0.8%	2.6%
Southampton	23866	Ivor	2,316	2,357	74.1%	20.9%	1.8%	0.7%	2.5%
Southampton	23874	Newsoms	1,001	990	56.7%	40.3%	1.9%	0.2%	0.9%
Southampton	23878	Sedley	1,180	1,193	74.4%	22.1%	1.2%	0.6%	1.7%
Surry	23881	Spring Grove	2,505	2,524	61.7%	33.5%	2.2%	0.4%	2.3%
Surry	23883	Surry	2,243	2,225	45.6%	49.0%	2.2%	0.5%	2.6%
Sussex	23888	Wakefield	2,167	2,157	51.1%	44.5%	1.7%	0.8%	1.8%
Sussex	23890	Waverly	6,388	6,405	35.0%	60.0%	3.3%	0.3%	1.3%
Isle of Wight	23898	Zuni	2,134	2,146	80.2%	15.0%	1.5%	0.7%	2.6%
Gates	27926	Corapeake	1,918	1,885	72.7%	21.9%	3.4%	0.2%	1.7%
Gates	27935	Eure	1,505	1,452	74.8%	20.7%	2.3%	0.1%	2.3%
Gates	27937	Gates	4,024	3,953	58.9%	34.1%	2.4%	0.2%	4.4%
Gates	27938	Gatesville	1,376	1,340	51.2%	45.6%	0.9%	0.1%	2.2%
Gates	27946	Hobbsville	1,097	1,071	56.7%	38.3%	1.9%	0.3%	2.8%
Gates	27979	Sunbury	1,651	1,612	59.5%	35.7%	2.1%	0.2%	2.4%
Total SOH Service Area			178,253	183,376	54.7%	38.2%	3.3%	1.2%	2.5%

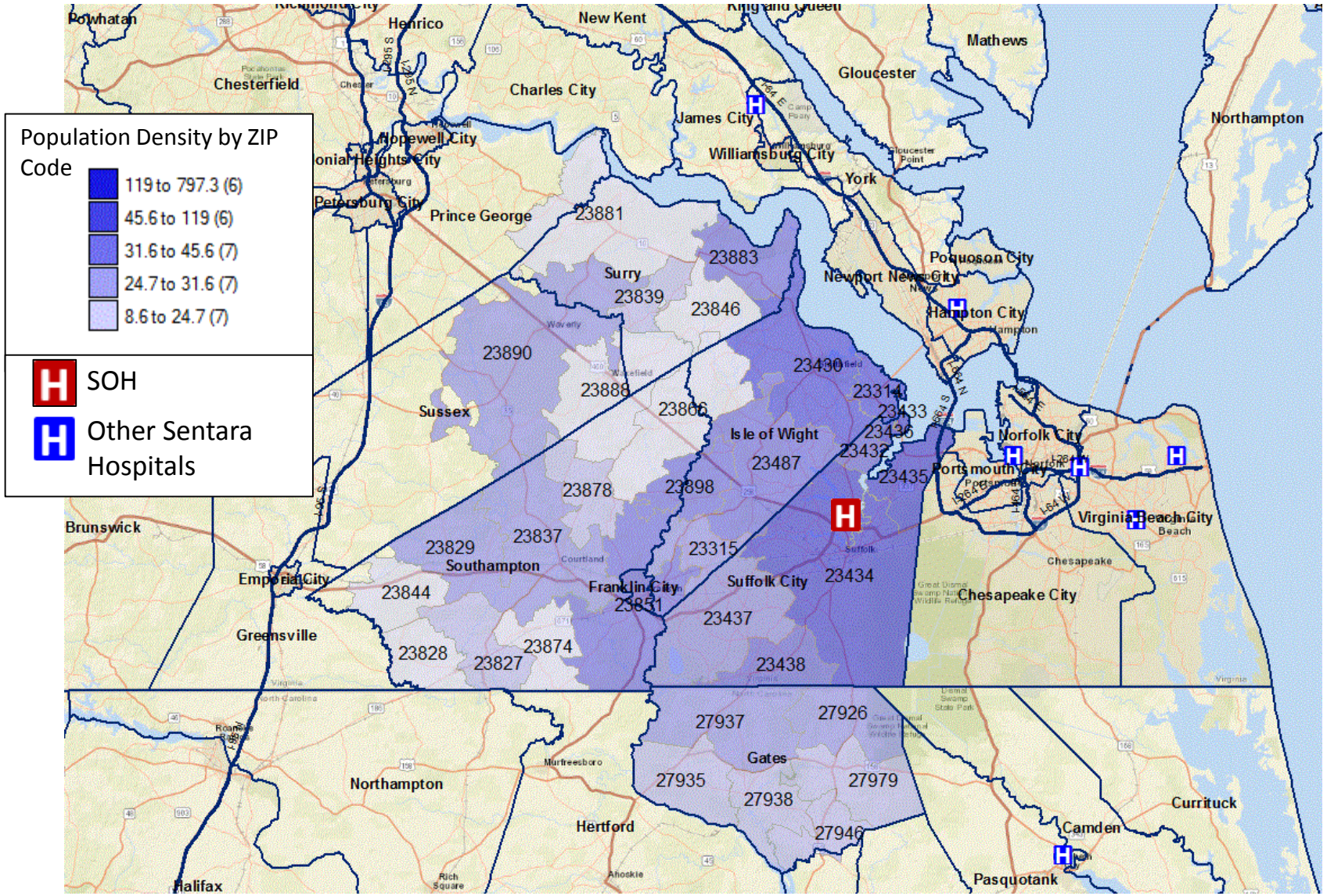
Source: Truven/Market Expert

2016 Total Population by ZIP Code



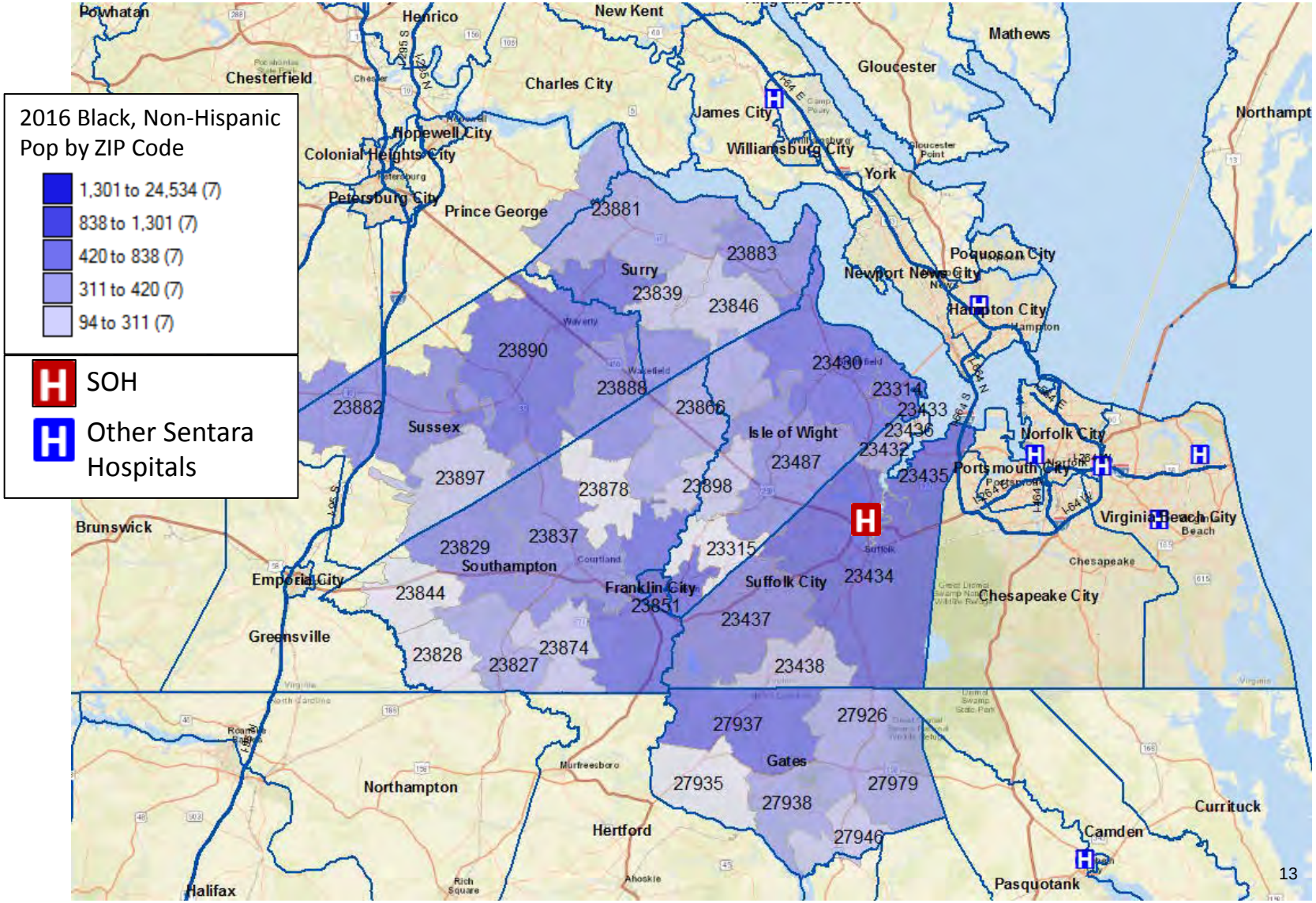
Source: Truven/Market Expert

2016 Population Density by ZIP Code



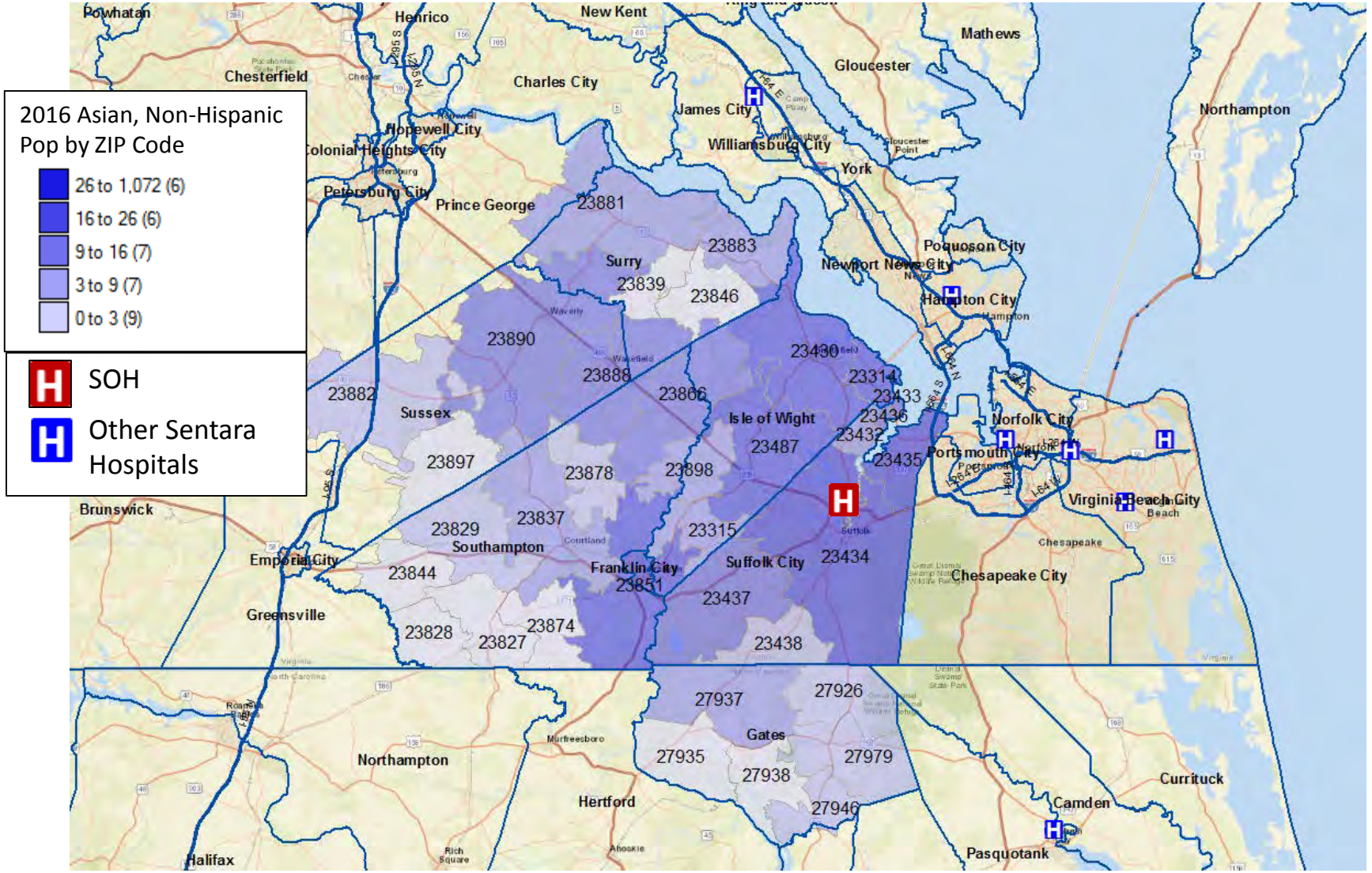
Source: Truven/Market Expert

2016 Black, Non-Hispanic Population by ZIP Code



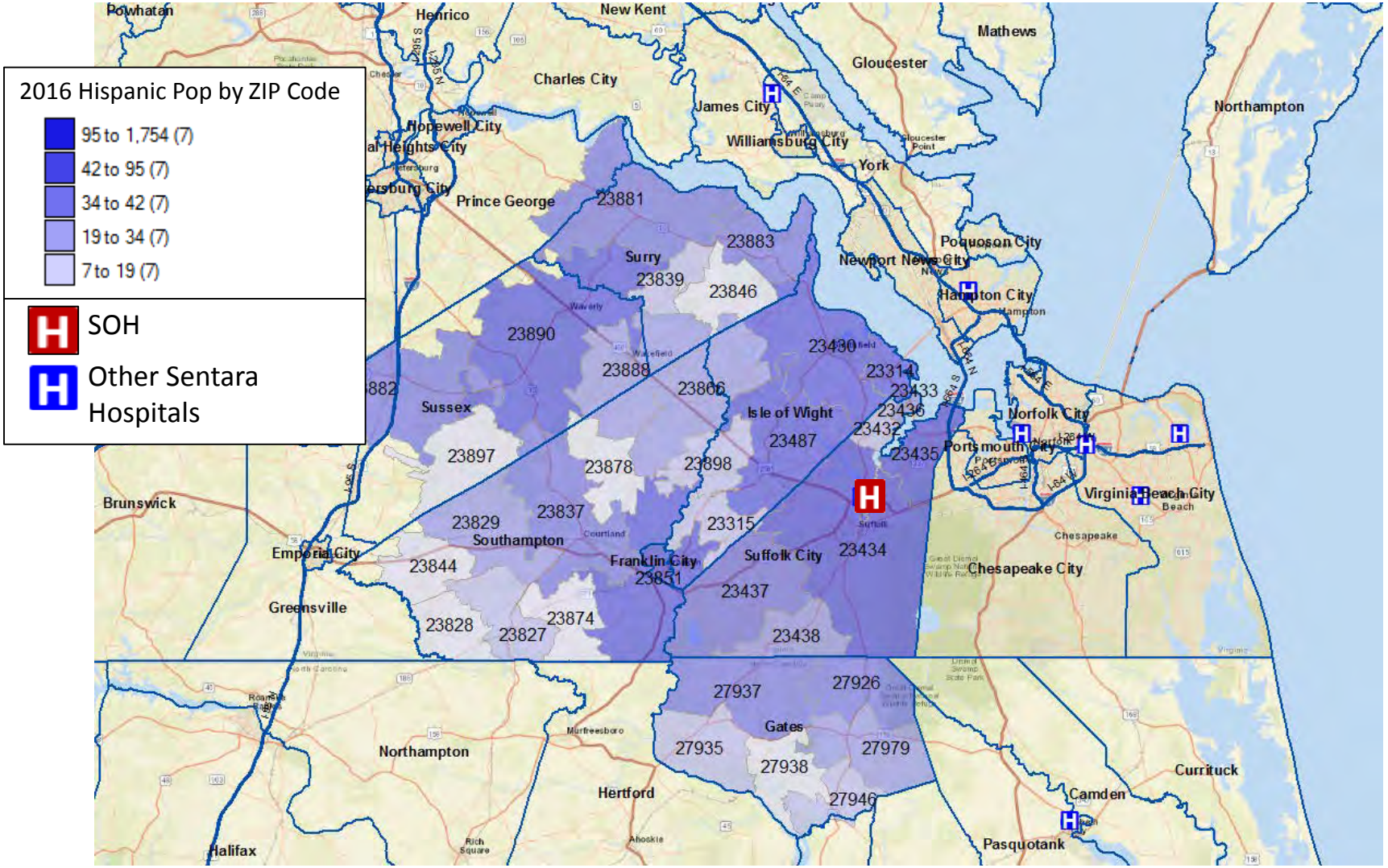
Source: Truven/Market Expert

2016 Asian, Non-Hispanic Population by ZIP Code



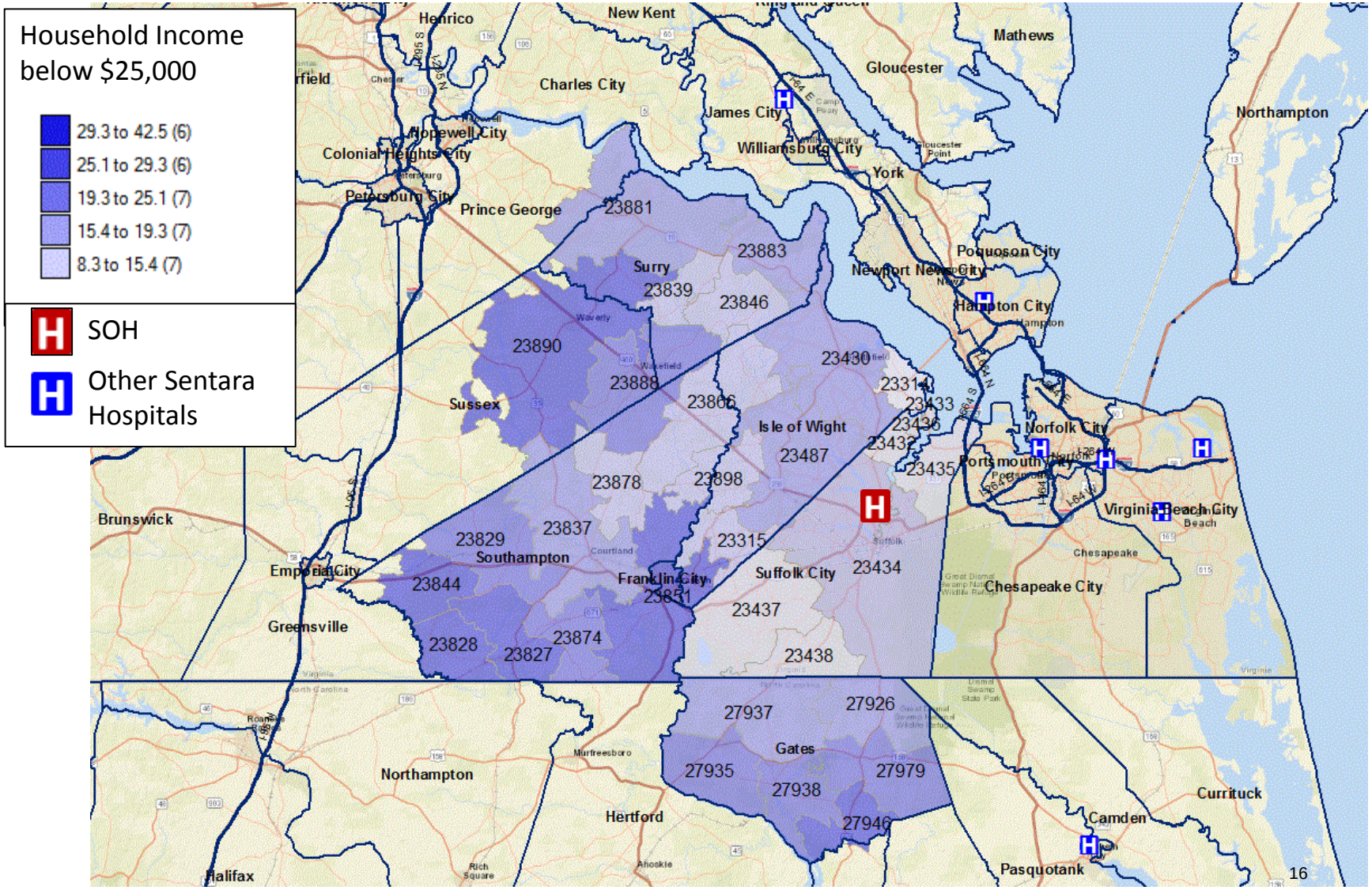
Source: Truven/Market Expert

2016 Hispanic Population by ZIP Code



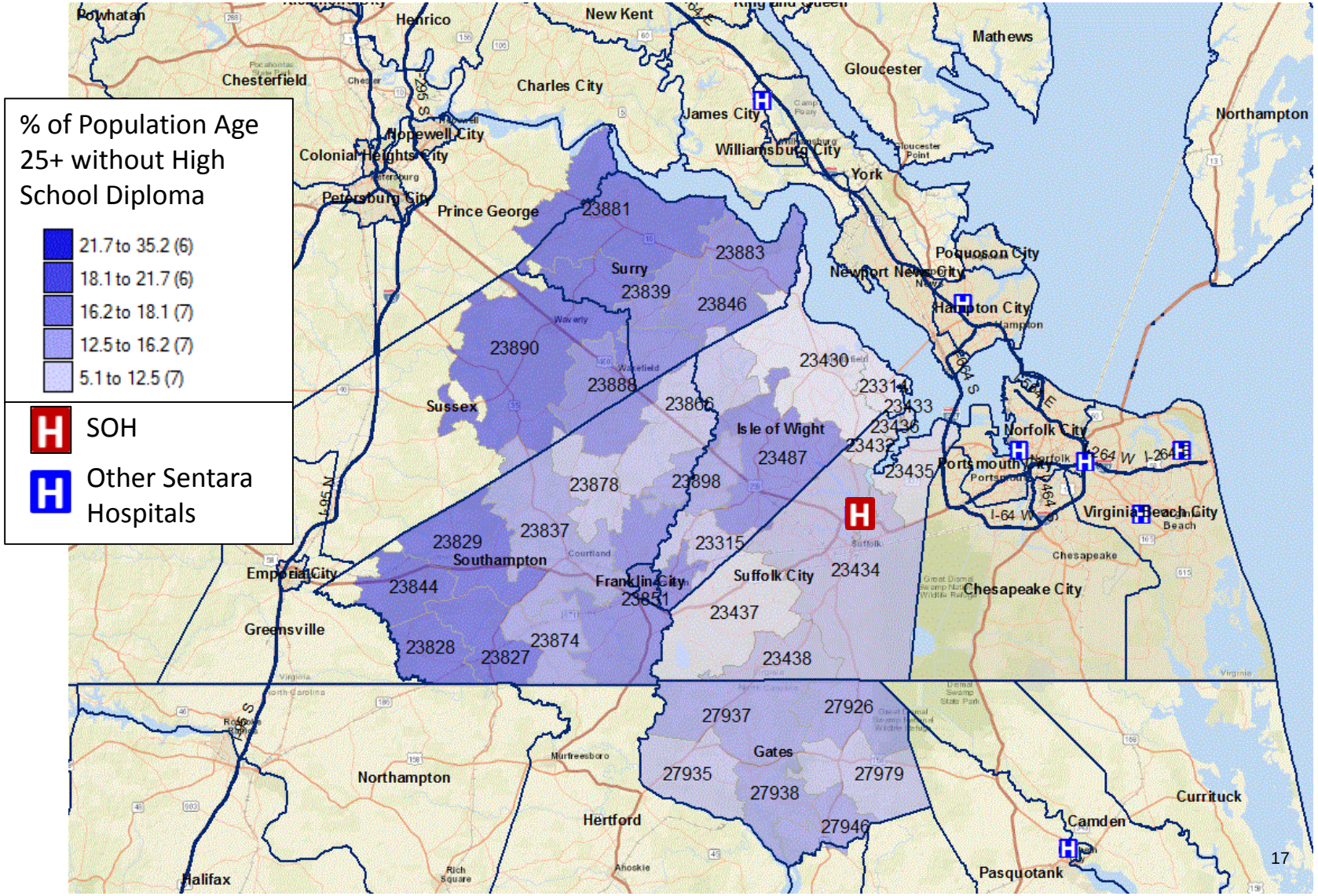
Source: Truven/Market Expert

2016 % of Households with Income below $25,000



Source: Truven/Market Expert

2016 % of Population Age 25+ without a High School Diploma



Source: Truven/Market Expert

ZIP Codes Included in SOH Service Area

ZIP	City/County	ZIP Common Name
23314	Isle Of Wight	Carrolton
23315	Isle Of Wight	Carrsville
23430	Isle Of Wight	Smithfield
23432	Suffolk	Chuckatuck
23433	Suffolk	Crittenden
23434	Suffolk	Suffolk Downtown
23435	Suffolk	Driver
23436	Suffolk	Hobson
23437	Suffolk	Holland
23438	Suffolk	Whaleyville
23487	Isle Of Wight	Windsor
23827	Southampton	Boykins
23828	Southampton	Branchville
23829	Southampton	Capron
23837	Southampton	Courtland
23839	Surry	Dendron
23844	Southampton	Drewryville

ZIP	City/County	ZIP Common Name
23846	Surry	Elberon
23851	Franklin	Franklin
23866	Southampton	Ivor
23874	Southampton	Newsoms
23878	Southampton	Sedley
23881	Surry	Spring Grove
23883	Surry	Surry
23888	Sussex	Wakefield
23890	Sussex	Waverly
23898	Isle Of Wight	Zuni
27926	Gates	Corapeake
27935	Gates	Eure
27937	Gates	Gates
27938	Gates	Gatesville
27946	Gates	Hobbsville
27979	Gates	Sunbury

Health Status Indicators Report

Prepared for Sentara Obici Hospital

By Community Health Solutions

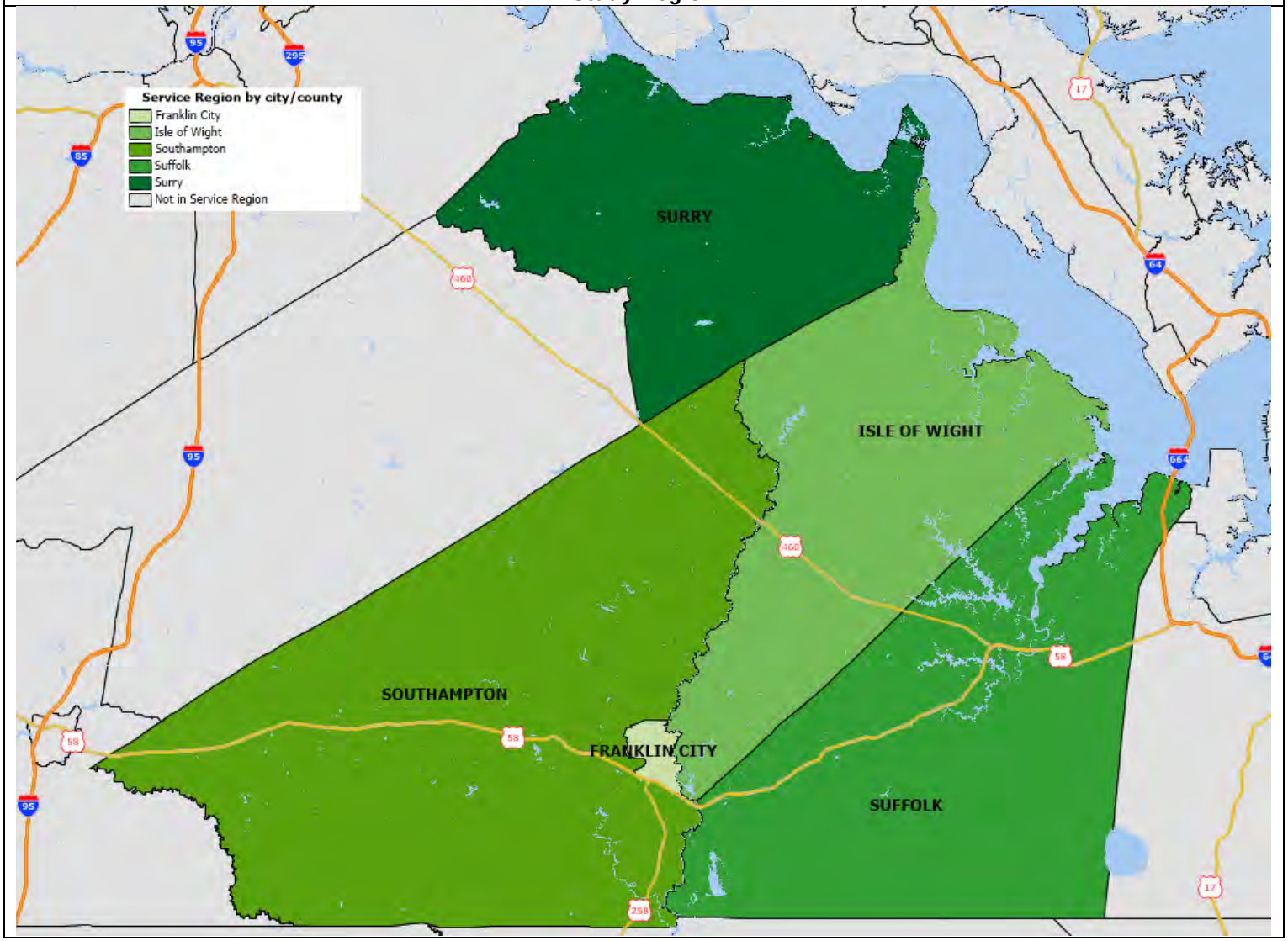
September 2016

Table of Contents

Introduction

This document presents a health status indicators report for Sentara Obici Hospital. The report was commissioned by Sentara Healthcare and Sentara Obici Hospital, and produced by Community Health Solutions. The study presents health status indicators for the Sentara Obici Hospital region in Virginia. The study region includes the cities of Suffolk and Franklin; and the counties of Isle of Wight, Southampton, Surry and Sussex.

Study Region



The study draws upon multiple data sources to present nine health indicator profiles in the following categories:

1. Mortality Profile
2. Maternal and Infant Health Profile
3. Preventable Hospitalization Profile
4. Behavioral Health Hospitalization Profile
5. Adult Health Risk Factor Profile
6. Youth Health Risk Factor Profile
7. Uninsured Profile
8. Cancer Profile
9. Communicable Disease Profile

The profiles are presented in the order listed above in the following pages. Following the profiles, *Appendix A* presents a set of Zip Code-Level maps of selected indicators. *Appendix B* provides detail on the methods used to produce the indicators.

Study Approach

This document contains a wide array of community health indicators from multiple sources. By design, the profiles do not include every possible indicator of community health. The profiles are focused on a core 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. The analysis objectives for this study included the following:

- Provide a snapshot analysis (for the most current year of data) for each indicator profile.
- Provide a trend analysis (for the 2011-2013 timeframe) of selected indicators as requested by Sentara Healthcare.
- Provide both counts and rates (where available) for all indicators. *Counts* refer to the number of cases of a particular health condition, such as the number of newborns with low birth weight. *Rates* refer to the number of cases per capita, such as the percent of all newborns with low birth weight. Counts are helpful for understanding the magnitude of need within a region, while rates are helpful for comparing health indicators across geographies with different population sizes (i.e. the study region vs. Virginia statewide).
- For the snapshot indicators, identify where the study region rates were better or worse (higher or lower, depending on the indicator), than the state rate. For this report, a study region rate within one percent of the state rate is considered comparable (no difference).
- For the trend indicators, identify where the study region trend differs from the state trend. For this report, a percent change of one percent is considered relatively stable (no change).

1. Mortality Profile

This profile presents indicators of death counts and rates for the local area compared to Virginia. The indicators are based on analysis of death record data provided by the Virginia Department of Health, and demographic data from Alteryx, Inc. (see *Appendix B* for details on methods.)

Mortality Snapshot (2013)

As shown in *Exhibit 1A*:

- In 2013 there were 1,553 deaths in the study region.
- The leading causes of death in the study region were Malignant Neoplasms (Cancer), Heart Disease, Chronic Lower Respiratory Diseases, Cerebrovascular Diseases (Stroke), and Unintentional Injury.
- The death rates for the study region were higher (worse) than the statewide rates for all causes combined, and for eight of the 14 leading causes of death. Specifically, the death rates for the study region were higher than the statewide rates for Malignant Neoplasms (Cancer), Heart Disease, Chronic Lower Respiratory Diseases, Cerebrovascular Diseases (Stroke), Alzheimer's Disease, Diabetes, Nephritis and Nephrosis, and Influenza and Pneumonia.

Mortality Trend – All Deaths (2011-2013)

- **Trend by Cause:** As shown in *Exhibit 1B,* from 2011 to 2013, study region rates:
    - Increased for Chronic Lower Respiratory Diseases, Malignant Neoplasms (Cancer) and Unintentional Injury;
    - Declined for deaths by all causes combined, Heart Disease; Cerebrovascular Diseases; Diabetes; Alzheimer's Disease; Nephritis and Nephrosis; and Influenza and Pneumonia.
    - Unlike the state, the study region rates increased for Malignant Neoplasms (Cancer), Chronic Lower Respiratory Diseases and Unintentional Injury.

- **Trend by Race/Ethnicity:** As shown in *Exhibit 1C,* from 2011 to 2013, study region counts:
    - Increased for the Black/African American population; and
    - Declined for the White population.
    - Unlike the state, the study region rates declined for the White population.

- **Trend by Sex:** As shown in *Exhibit 1D,* from 2011 to 2013, study region counts remained relatively stable for the female and male populations. Unlike the state, the study region counts remained relatively stable for both groups.

Premature Death Trends (2011-2013)

- **Definition:** Consistent with conventions in the field, premature mortality can be defined as deaths that occur before age 75.
- **Leading Causes:** As shown in *Exhibit 1E*, over the 2011 to 2013 time period, roughly 47% of all deaths could be classified as premature deaths; 45% of all deaths could be classified as premature deaths in Virginia as a whole.

- **Trend by Cause:** As shown in *Exhibit 1E*, from 2011-20123, the study region premature death counts:
    - Increased for Cerebrovascular Diseases, Malignant Neoplasms, and Unintentional Injury; and
    - Declined for all premature deaths combined, and Heart Disease.
    - Unlike the state, the study region counts increased for Malignant Neoplasms and Unintentional Injury.
    - Unlike the state, the study region counts declined for all premature deaths combined, and for Heart Disease.

- **Trend by Race/Ethnicity:** As shown in *Exhibit 1F,* from 2011 to 2013, study region premature death counts:
    - Declined for the White population; and
    - Remained relatively stable for the Black/African American population.
    - Unlike the state, the study region counts declined for the White population.
    - Unlike the state, the study region counts remained relatively stable for the Black/African American population.

- **Trend by Sex:** As shown in *Exhibit 1G*, from 2011 to 2013, the number of premature deaths in the study region declined for both the female and male populations. Unlike the state, the study region counts declined for both the female and male populations.

Exhibit 1A. Mortality Snapshot (2013)

Indicator	Virginia	Study Region
Counts		
Deaths by All Causes	62,309	1,553
Counts-Leading 14 Causes of Death		
Malignant Neoplasms (Cancer) Deaths	14,348	387
Heart Disease Deaths	13,543	339
Chronic Lower Respiratory Diseases Deaths	3,168	85
Cerebrovascular Diseases (Stroke) Deaths	3,278	75
Unintentional Injury Deaths	2,794	68
Alzheimer's Disease Deaths	1,634	50
Diabetes Mellitus Deaths	1,618	47
Nephritis and Nephrosis Deaths	1,547	43
Influenza and Pneumonia Deaths	1,430	33
Septicemia Deaths	1,464	32
Chronic Liver Disease Deaths	836	23
Suicide Deaths	1,047	22
Primary Hypertension and Renal Disease Deaths	629	14
Parkinson's Disease Deaths	549	8
Age Adjusted Death Rates per 100,000 Population		
Deaths by All Causes	720.1	825.1
Malignant Neoplasms (Cancer) Deaths	161.3	199.3
Heart Disease Deaths	155.9	179.5
Chronic Lower Respiratory Diseases Deaths	37.2	45.6
Cerebrovascular Diseases (Stroke) Deaths	38.5	38.9
Unintentional Injury Deaths	33.0	38.0
Alzheimer's Disease Deaths	19.6	27.8
Diabetes Mellitus Deaths	18.3	23.9
Nephritis and Nephrosis Deaths	18.0	22.6
Influenza and Pneumonia Deaths	16.8	18.0
Septicemia Deaths	17.7	16.7
Chronic Liver Disease Deaths	8.9	--
Suicide Deaths	12.2	--
Primary Hypertension and Renal Disease Deaths	7.2	--
Parkinson's Disease Deaths	6.7	--
Note: Rates are not calculated where n<30.		
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.		

Exhibit 1B. Mortality Trend (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All Deaths (Leading 10 Causes)					
Total Deaths (All Causes)	1,561	1,610	1,553	3%	-1%
Heart Disease	377	358	339	3%	-10%
Malignant Neoplasms (Cancer)	339	391	387	1%	14%
Cerebrovascular Diseases (Stroke)	87	67	75	-1%	-14%
Chronic Lower Respiratory Diseases	77	88	85	2%	10%
Diabetes Mellitus	58	54	47	-1%	-19%
Alzheimer's Disease	53	60	50	-9%	-6%
Unintentional Injury	52	53	68	2%	31%
Nephritis and Nephrosis	44	32	43	9%	-2%
Influenza and Pneumonia	34	31	33	2%	-3%
Septicemia	29	31	32	7%	--
Age Adjusted Death Rates per 100,000 Population					
Total Deaths (All Causes)	894.3	876.5	825.1	-2%	-8%
Heart Disease	206.3	191.3	179.5	-3%	-13%
Malignant Neoplasms (Cancer)	180.1	205.9	199.3	-5%	11%
Cerebrovascular Diseases (Stroke)	48.7	35.8	38.9	-7%	-20%
Chronic Lower Respiratory Diseases	43.6	49.5	45.6	-3%	5%
Diabetes Mellitus	31.1	29.7	23.9	-6%	-23%
Alzheimer's Disease	31.1	34.2	27.8	-15%	-11%
Unintentional Injury	29.5	31.6	38.0	-1%	29%
Nephritis and Nephrosis	25.0	17.2	22.6	2%	-10%
Influenza and Pneumonia	19.2	17.1	18.0	-3%	-6%
Septicemia	--	16.1	16.7	5%	--

Note: Rates are not calculated where n<30. For this report, a percent change of one percent is considered relatively stable (no change).

Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

Exhibit 1C. All Death Trend by Race/Ethnicity (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Asian	6	2	6	15%	--
Black/African American	615	664	665	4%	8%
White	936	939	876	1%	-6%
Hispanic Ethnicity	4	8	6	8%	--
Notes: Rates and/or percent change are not calculated where n<30. Deaths with Other/Unknown race were not included in the analysis. Hispanic is a classification of ethnicity; therefore, Hispanic individuals are also included in the race categories. For this report, a percent change of one percent is considered relatively stable (no change).					
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.					

Exhibit 1D. All Death Trend by Sex (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Female	778	824	769	3%	-1%
Male	783	786	784	4%	0%
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.					

Exhibit 1E. Leading Causes – Premature Death Trend (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Premature Deaths (Leading 10 Causes)					
Total Premature Deaths (All Causes)	761	740	732	4%	-4%
Malignant Neoplasms (Cancer)	220	229	232	0%	5%
Heart Disease	169	161	135	6%	-20%
Unintentional Injury	40	41	45	-2%	13%
Diabetes Mellitus	34	21	26	-1%	--
Cerebrovascular Diseases	30	30	33	5%	10%
Chronic Lower Respiratory Diseases	27	28	30	1%	--
Nephritis and Nephrosis	20	13	21	16%	--
Suicide	20	15	22	0%	--
Chronic Liver Disease	14	21	19	21%	--
Septicemia	13	15	17	11%	--

Note: Rates and/or percent change are not calculated where n<30. For this report, a percent change of one percent is considered relatively stable (no change).

Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

Exhibit 1F. Premature Mortality Trend by Race/Ethnicity (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Asian	6	0	3	3%	--
Black/African American	341	344	344	3%	1%
White	412	393	381	2%	-8%
Hispanic Ethnicity	3	5	6	0%	--

Notes: Rates and/or percent change are not calculated where n<30. Deaths with Other/Unknown race were not included in the analysis. Hispanic is a classification of ethnicity; therefore, Hispanic individuals are also included in the race categories. For this report, a percent change of one percent is considered relatively stable (no change).

Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

Exhibit 1G. Premature Mortality Trend by Sex (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Female	314	328	293	3%	-7%
Male	447	412	439	4%	-2%

Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

2. Maternal and Infant Health Profile

This profile presents indicators of maternal and infant health for the local area compared to Virginia. The indicators are based on analysis of birth record data provided by the Virginia Department of Health, and demographic data from Alteryx, Inc. (see *Appendix B* for details on methods.)

Maternal and Infant Health Snapshot (2013)

- As shown in *Exhibit 2A,* in 2013 there were 2,440 total pregnancies and 1,865 live births in the study region. Among the live births were 158 low weight births, 294 births with late prenatal care, 797 non-marital births, and 111 births to teens.
- The study region had higher (worse) rates than Virginia as a whole for births with late prenatal care, non-marital births, teen pregnancies, and teen births.
- Focusing on infant mortality, there were 84 infant deaths for the study region from 2009 to 2013. The infant mortality rate was higher (worse) than the statewide rate for this period.

Maternal and Infant Health Trend (2011-2013)

- **Select Birth and Teenage Pregnancy Indicators.** As shown in *Exhibit 2B*, from 2011 to 2013 study region rates:
    - Declined for live births overall, non-marital births, and teenage pregnancies; and
    - Remained relatively stable for low weight births.
    - Unlike the state, the study region rates declined for non-marital births.
- **Teenage Births Trend by Age Group**. As shown in *Exhibit 2C*, from 2011 to 2013 study region counts of teen births declined for all age groups where data were sufficient to calculate a rate. The study region trend was consistent with the statewide trend.
- **Teenage Births Trend by Race/Ethnicity**. As shown in *Exhibit 2D,* from 2011 to 2013 study region counts of teen births declined among all racial/ethnic groups where data were sufficient to calculate a rate. The study region trend was consistent with the statewide trend.

Exhibit 2A. Maternal and Infant Health Snapshot (2013)

Indicator	Virginia	Study Region
Counts		
Total Pregnancies	126,655	2,440
Induced Terminations of Pregnancy	19,724	398
Natural Fetal Deaths	4,954	177
Total Live Births	101,977	1,865
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	8,178	158
Late Prenatal Care (No Prenatal Care in First 13 Weeks)	13,435	294
Non-Marital Births	35,289	797
Total Teen Pregnancies Ages 10-19	7,447	168
Pregnancies- Teens Age 18-19	5,647	126
Pregnancies- Teens Age 15-17	1,712	40
Pregnancies-Teens Age <15	88	2
Live Births to Teens Age 10-19	5,316	111
Live Births to Teens Age 18-19	4,073	86
Live Births to Teens Age 15-17	1,208	24
Live Births to Teens Age <15	35	1
Total Infant Deaths 2009-2013	3,402	84
Rates		
Live Birth Rate per 1,000 Population	12.3	11.2
Low Weight Births pct. of Total Live Births	8%	8%
Late Prenatal Care (No Prenatal Care in First 13 Weeks) pct. of Total Live Births	13%	16%
Non-Marital Births pct. of Total Live Births	35%	43%
Teenage (age 10-19) Pregnancy Rate per 1,000 Teenage Female Population (age 10-19)	14.4	16.0
Pregnancy Rate- Teens Age 18-19	50.4	70.9
Pregnancy Rate- Teens Age 15-17	11.3	12.5
Pregnancy Rate-Teens Age <15	0.3	0.4
Teenage (age 10-19) Live Birth Rate per 1,000 Teenage Female Population (age 10-19)	10.3	10.6
Teenage (age 18-19) Live Birth Rate per 1,000 Teenage Female Population (age 18-19)	36.4	48.4
Teenage (age 15-17) Live Birth Rate per 1,000 Teenage Female Population (age 15-17)	8.0	7.5
Teenage (age <15) Live Birth Rate per 1,000 Teenage Female Population (age <15)	0.1	0.2
Five-Year Infant Mortality Rate per 1,000 Live Births) 2009-2013	6.6	8.8

Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B.

Exhibit 2B. Select Birth and Teenage Pregnancy Indicator Trend (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total Live Births	1,920	1,847	1,865	-1%	-3%
Low Weight Births	165	165	158	0%	-4%
Non Marital Births	839	803	797	-3%	-5%
Teenage (age 10-19) Pregnancies	219	185	168	-23%	-23%
Rates	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total Live Births (per 1,000 population)	11.4	10.9	11.2	-3%	-2%
Low Weight (as a percent of Total Live Births)	9%	9%	8%	0%	-1%
Non Marital Births (as a percent of Total Live Births)	44%	43%	43%	-1%	-2%
Teenage (age 10-19) Pregnancies (per 1,000 Teenage Female Population)	20.5	17.6	16.0	-23%	-22%
Note: Rates and/or percent change are not calculated where n<30. For this report, a percent change of one percent is considered relatively stable (no change).					
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B.					

Exhibit 2C. Teenage Births Trend by Age (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Teenage (Age 10-19) Live Births						
Total Teenage Live Births		140	119	111	-19%	-21%
Age	18-19	102	88	86	-15%	-16%
	15-17	37	28	24	-29%	--
	<15	1	3	1	-39%	--
Note: Rates and/or percent change are not calculated where n<30.						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

Exhibit 2D. Teenage Births Trend by Race/Ethnicity (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Teenage (Age 10-19) Live Births						
Race	Black/African American	85	77	80	-23%	-6%
	White	47	41	28	-26%	--
Ethnicity	Hispanic Ethnicity	5	1	2	-5%	--
Note: Rates and/or percent change are not calculated where n<30. Births with Other/Unknown race were not included in the analysis. Hispanic is classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

3. Preventable Hospitalization Profile

This profile presents indicators of preventable hospitalizations based on prevention quality indicator (PQI) definitions for the study region compared to Virginia. High rates of hospitalization for these conditions indicate potential gaps in access to quality outpatient services for community residents. This profile presents indicators of preventable hospitalizations based on PQI definitions for the study region compared to Virginia. The indicators are based on analysis of hospital discharge data provided by the Virginia Health Information (VHI), and demographic data from Alteryx, Inc. (see *Appendix B* for details on methods.) The analysis includes records of discharges of Virginia residents from Virginia hospitals excluding state and federal facilities.

Preventable Hospitalization Snapshot (2013)

As shown in *Exhibit 3A*:

- In 2013 there were 932 PQI hospital discharges from Virginia hospitals for residents of the study region.
- The leading PQI diagnoses in the study region were Congestive Heart Failure, COPD or Asthma in Older Adults (age 40+), Bacterial Pneumonia, Urinary Tract Infection, and Diabetes.
- The study region PQI rates were lower (better) than the statewide rates for Total PQIs, and for all specific diagnoses.

Preventable Hospitalization Trend (2011-2013)

- **By Leading Diagnoses.** As shown in *Exhibit 3B,* from 2011 to 2013, study region rates declined for Total PQIs, and for all specific PQI diagnoses. Unlike the state, the study region rates declined for Diabetes.

- **By Age Group**. As shown in *Exhibit 3C,* from 2011 to 2013, study region rates declined for all age groups. The study region trend was consistent with the statewide trend.

- **By Race/Ethnicity**. As shown in *Exhibit 3D*, from 2011 to 2013, study region rates declined for all racial/ethnic groups where data were sufficient to calculate a rate. The study region trend was consistent with the statewide trend.

- **By Payer.** As shown in *Exhibit 3E*, from 2011 to 2013, study region counts declined for all payer groups. Unlike the state, the study region counts declined for the Medicare and Self-Pay/Uninsured populations.

Exhibit 3A. Preventable Hospitalization Snapshot (2013)

Indicator	Virginia	Study Region
Counts		
Total PQI Discharges (see note)	76,860	932
Congestive Heart Failure	18,239	280
COPD or Asthma in Older Adults (age 40+)	16,026	154
Bacterial Pneumonia	11,867	145
Diabetes	9,938	116
Urinary Tract Infection	8,452	102
Dehydration	7,743	80
Hypertension	2,768	28
Perforated Appendix	1,189	16
Asthma in Younger Adults (age 18-39)	444	11
Angina	941	9
Age Adjusted Rates per 100,000 Population		
Total PQI Discharges (see note)	897.9	490.2
Congestive Heart Failure	209.1	143.5
COPD or Asthma in Older Adults (age 40+)	176.3	77.2
Bacterial Pneumonia	136.4	76.9
Diabetes	114.5	62.9
Urinary Tract Infection	100.1	55.7
Dehydration	89.5	42.8
Hypertension	31.7	--
Perforated Appendix	13.7	--
Asthma in Younger Adults (age 18-39)	12.0	--
Angina	5.0	--
Note: -- Rates are not calculated where n<30. The sum of the individual diagnoses may differ slightly from the Total Discharges figure for technical reasons.		
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.		

Exhibit 3B. Preventable Hospitalization Trend by Selected Diagnosis (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total PQI Discharges *(see note)*	1,281	1,069	932	-6%	-27%
Congestive Heart Failure	332	276	280	-8%	-16%
Bacterial Pneumonia	285	220	145	-29%	-49%
COPD or Asthma in Older Adults (age 40+)	220	203	154	-20%	-30%
Urinary Tract Infection	167	125	102	-22%	-39%
Diabetes	116	95	116	-2%	0%
Age Adjusted Rates per 100,000 Population					
Total PQI Discharges *(see note)*	712.5	576.7	490.2	-9%	-31%
Congestive Heart Failure	377.7	156.8	143.5	-10%	-80%
Bacterial Pneumonia	269.1	127.0	76.9	-31%	-71%
COPD or Asthma in Older Adults (age 40+)	153.3	103.3	77.2	-31%	-6%
Urinary Tract Infection	164.9	70.9	55.7	-24%	-66%
Diabetes	65.1	50.6	62.9	0%	-3%

Note: The sum of the individual diagnoses may differ slightly from the Total Discharges figures for technical reasons.

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

Exhibit 3C. Preventable Hospitalization Trend by Age Group (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Age	Adults Age 18-29	45	41	38	-23%	-16%
	Adults Age 30-44	89	73	61	-21%	-31%
	Adults Age 45-64	355	286	284	-18%	-20%
	Seniors Age 65+	792	669	549	-20%	-31%
Crude Rates per 100,000 population						
Age	Adults Age 18-29	202.5	178.7	166.6	-24%	-18%
	Adults Age 30-44	269.1	228.3	191.5	-21%	-29%
	Adults Age 45-64	707.4	558.2	567.5	-19%	-20%
	Seniors Age 65+	3,550.1	2,832.1	2,400.7	-23%	-32%

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

Exhibit 3D. Preventable Hospitalization Trend by Race/Ethnicity (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Race	Asian	1	2	0	-11%	--
	Black/African American	673	557	511	-16%	-24%
	White	586	483	402	-22%	-31%
Ethnicity	Hispanic Ethnicity	1	2	1	-30%	--
Crude Rates per 100,000 population						
Race	Asian	--	--	--	-24%	--
	Black/African American	990.9	815.7	774.6	-21%	-22%
	White	627.4	514.2	431.6	-19%	-31%
Ethnicity	Hispanic Ethnicity	--	--	--	-23%	--

Note: -- Rates and/or percent change are not calculated where n<30.

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

Exhibit 3E. Preventable Hospitalization Trend by Payer (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Payer	Medicare	915	740	627	2%	-31%
	Medicaid	107	98	88	-6%	-18%
	Private	131	122	108	-12%	-18%
	Self-Pay/Uninsured	61	57	57	2%	-7%

Note: -- Rates are not calculated because denominator data are not readily available.

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

4. Behavioral Health Hospitalization Profile

Behavioral health is another important indicator of community health status. The indicators in this Behavioral Health Hospitalization Profile are based on analysis of hospital discharge data provided by Virginia Health Information (VHI), and demographic data from Alteryx, Inc. (see *Appendix B* for details on methods.) The analysis includes records of discharges of adult Virginia residents from Virginia hospitals excluding state and federal facilities.
Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, the analysis in this profile does not include data for residents age 0-17.

Behavioral Health Hospitalization Snapshot-Age 18+ (2013)

As shown in *Exhibit 4A*:

- In 2013, there were 1,003 behavioral health (BH) discharges for residents of the study region.
- The leading diagnoses for behavioral health hospitalization in the study region were Affective Psychoses, Schizophrenic Disorders, Adjustment Reaction, Alcoholic Psychoses, and Depressive Disorders-Not Elsewhere Classified.
- The BH discharge rates for the study region were higher than the statewide rates for Schizophrenic Disorders and Adjustment Reaction

Behavioral Hospitalization Trend-Age 18+ (2011-2013)

- **By Leading Diagnoses.** Focusing on three diagnoses identified as being of particular interest for this study, as shown in *Exhibit 4B*, from 2011 to 2013, study region rates:
    - Increased for Affective Psychoses and Alcoholic Psychoses; and
    - Declined for Total BH Discharges (all BH diagnoses combined), and Schizophrenic Disorders.
    - Unlike the state, the study region rates increased for Affective Psychoses.
    - Unlike the state, the study region rates declined for Total BH Discharges (all BH diagnoses combined) and Schizophrenic Disorders.

- **By Age Group**. As shown in *Exhibit 4C*, from 2011 to 2013, study region rates:
    - Increased for residents age 18-29 and 45-64; and
    - Declined for residents age 30-44 and 65+.
    - Unlike the state, the study region rate declined for the 30-44 age group.

- **By Sex.** As shown in *Exhibit 4D*, from 2011 to 2013, study region rates declined for both female and male residents. Unlike the state, the study region rate declined for males.

- **By Race/Ethnicity.** As shown in *Exhibit 4E*, from 2011 to 2013, the study region rates declined for both the White and Black/African American populations. Unlike the state, the study region rate declined for both the White and Black/African American population.

- **By Payer.** As shown in *Exhibit 4F*, from 2011 to 2013, study region counts:
  - Increased for the Private Insurance population; and
  - Declined for the Medicare, Medicaid and Self-Pay/Uninsured populations.
  - Unlike the state, the study region counts increased for the Private Insurance population.
  - Unlike the state, the study region counts declined for the Medicare, Medicaid and the Self-Pay/Uninsured populations.

Exhibit 4A. Behavioral Health Hospitalization Snapshot- Age 18+ (2013)

Indicator	Virginia	Study Region
Counts-BH Discharges		
Total BH Discharges for All Diagnoses	53,638	1,003
Counts-Leading 14 BH Discharges		
Affective Psychoses, BH Discharges	22,078	403
Schizophrenic Disorders, BH Discharges	8,064	185
Adjustment Reaction, BH Discharges	2,031	72
Alcoholic Psychoses, BH Discharges	4,033	64
Depressive Disorder, Not Elsewhere Classified, BH Discharges	2,608	31
Altered Mental Status, BH Discharges	976	27
Drug Psychoses, BH Discharges	2,102	27
Other Nonorganic Psychoses, BH Discharges	1,951	25
Alcohol Dependence Syndrome, BH Discharges	2,388	24
Symptoms Involving Head or Neck, BH Discharges	883	21
Neurotic Disorders, BH Discharges	982	20
Other Organic Psychotic Conditions-Chronic, BH Discharges	795	11
Drug Dependence, BH Discharges	810	10
Non Dependent Abuse of Drugs, BH Discharges	575	2
Note: Data for residents age 0-17 are not included. See details in Appendix B.		
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.		

Exhibit 4A. Behavioral Health Hospitalization Snapshot-Age 18+ (2013)- Continued

Indicator	Virginia	Study Region
Crude Rates Per 100,000 Population		
All Diagnoses	650.4	601.8
Affective Psychoses, BH Discharges	267.7	233.4
Schizophrenic Disorders, BH Discharges	97.8	110.4
Adjustment Reaction, BH Discharges	24.6	43.2
Alcoholic Psychoses, BH Discharges	48.9	37.8
Depressive Disorder, Not Elsewhere Classified, BH Discharges	31.6	18.6
Altered Mental Status, BH Discharges	11.8	--
Drug Psychoses, BH Discharges	25.5	--
Other Nonorganic Psychoses, BH Discharges	23.7	--
Alcohol Dependence Syndrome, BH Discharges	29.0	--
Symptoms Involving Head or Neck, BH Discharges #	10.7	--
Neurotic Disorders, BH Discharges	11.9	--
Other Organic Psychotic Conditions-Chronic, BH Discharges	9.6	--
Drug Dependence, BH Discharges	9.8	--
Non Dependent Abuse of Drugs, BH Discharges	7.0	--
Note: Rates are not calculated where n<30. Data for residents age 0-17 are not included. See details in Appendix B.		
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.		

Exhibit 4B. Behavioral Health Hospitalization Trend by Leading Diagnoses-Age 18+ (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total BH Discharges (All Diagnoses)	1,082	1,110	1,003	3%	-7%
Affective Psychoses	379	411	403	-1%	6%
Schizophrenic Disorders	211	218	185	1%	-12%
Alcoholic Psychoses	58	53	64	23%	10%
Crude Rates per 100,000 Population					
Total BH Discharges (All Diagnoses)	644.1	656.1	601.8	2%	-7%
Affective Psychoses	225.6	242.9	233.4	-2%	3%
Schizophrenic Disorders	125.6	128.9	110.4	0%	-12%
Alcoholic Psychoses	34.5	31.3	37.8	21%	9%

Note: Rates and/or percent change are not calculated where n<30. Data for residents age 0-17 are not included. See details in Appendix B. For this report, a percent change of one percent is considered relatively stable (no change).

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

Exhibit 4C. Behavioral Health Hospitalization Trend by Age (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Age	Adults Age 18-29	202	250	221	10%	9%
	Adults Age 30-44	305	304	262	2%	-14%
	Adults Age 45-64	386	385	402	3%	4%
	Seniors Age 65+	189	171	118	-4%	-38%
Crude Rates per 100,000 Population						
Age	Adults Age 18-29	908.8	1,089.4	969.1	7%	7%
	Adults Age 30-44	922.2	950.9	822.7	2%	-11%
	Adults Age 45-64	769.2	751.4	803.3	2%	4%
	Seniors Age 65+	847.2	723.9	516.0	-7%	-39%

Note: Rates and/or percent change are not calculated where n<30. Data for residents age 0-17 are not included. See details in Appendix B.

Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

Exhibit 4D. Behavioral Health Hospitalization Trend by Sex-Age 18+ (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Sex	Female	540	587	509	-1%	-6%
	Male	542	523	494	8%	-9%
Crude Rates per 100,000 Population						
Sex	Female	631.7	683.6	602.1	-2%	-5%
	Male	655.7	627.7	601.4	7%	-8%
Note: Rates and/or percent change are not calculated where n<30. Data for residents age 0-17 are not included. See details in Appendix B. For this report, a percent change of one percent is considered relatively stable (no change).						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

Exhibit 4E. Behavioral Health Hospitalization Trend by Race/Ethnicity-Age 18+ (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Race	Asian	7	4	3	14%	--
	Black/African American	469	468	428	2%	-9%
	White	575	609	536	2%	-7%
Ethnicity	Hispanic Ethnicity	6	2	1	-6%	--
Crude Rates per 100,000 Population						
Race	Asian	--	--	--	6%	--
	Black/African American	690.6	685.3	648.8	0%	-6%
	White	615.7	648.4	575.4	2%	-7%
Ethnicity	Hispanic Ethnicity	--	--	--	-7%	--
Note: Rates and/or percent change are not calculated where n<30. Data for residents age 0-17 are not included. See details in Appendix B.						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

Exhibit 4F. Behavioral Health Hospitalization Trend by Payer-Age 18+ (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Payer	Medicare	422	404	326	5%	-23%
	Medicaid	150	154	144	12%	-4%
	Private	370	431	426	-2%	15%
	Self-Pay/Uninsured	137	120	107	14%	-22%

Note: -- Rates are not calculated because denominator data are not readily available. Data for residents age 0-17 are not included. See details in Appendix B.

Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

5. Adult Health Risk Factor Profile

This profile presents indicators of adult health risks for adults age 18+ based on analysis of data from the Virginia Behavioral Risk Factor Surveillance Survey and demographic data from Alteryx, Inc. (see *Appendix B* for details on methods.) Please note that all indicators in this profile are estimates based on statistical analysis of survey data, and are subject to estimation error.

- As shown in *Exhibit 5*, substantial numbers of adults have lifestyle health risks related to nutrition, weight, physical inactivity, tobacco and alcohol. For example,
    - An estimated 105,074 adults age 18+ (82%) are not meeting the guidelines for fruit and vegetable intake,
    - An estimated 79,506 adults age 18+ (62%) are overweight or obese, and
    - An estimated 65,006 adults age 18+ (51%) are not meeting recommendations for physical activity.

Exhibit 5. Adult Health Risk Factor Profile (2014 Estimates)

Indicator		Virginia	Study Region
Estimates-Counts			
Estimated Adults age 18+		6,393,583	128,608
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	5,114,866	105,074
	Overweight or Obese	3,964,021	79,506
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	3,068,920	65,006
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	1,150,845	23,724
	Smoker	1,214,781	24,578
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	2,237,754	45,385
	High Blood Pressure (told by a doctor or other health professional)	1,918,075	37,342
	Arthritis (told by a doctor or other health professional)	1,534,460	28,905
	Diabetes (told by a doctor or other health professional)	575,422	15,884
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	1,214,781	24,282
	Fair or Poor Health Status	1,022,973	20,016
Behavioral Health Risk Factors	Dissatisfied with Their Life	359,536	7,053
	Frequent Mental Distress	457,497	9,062
	Inadequate Social or Emotional Support	412,372	7,773
Estimates-Percent of Adults Age 18+			
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	80%	82%
	Overweight or Obese	62%	62%
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	48%	51%
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	18%	18%
	Smoker	19%	19%
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	35%	35%
	High Blood Pressure (told by a doctor or other health professional)	30%	29%
	Arthritis (told by a doctor or other health professional)	24%	22%
	Diabetes (told by a doctor or other health professional)	9%	12%
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	19%	19%
	Fair or Poor Health Status	16%	16%
Behavioral Health Risk Factors	Dissatisfied with Their Life	6%	5%
	Frequent Mental Distress	7%	7%
	Inadequate Social or Emotional Support	6%	6%

Note: State-level estimates are provided for reference only, and direct comparisons of local estimates with state estimates are not recommended.

Source: Estimates produced by Community Health Solutions using Virginia Behavioral Health Risk Factor Surveillance Survey data and demographic data from Alteryx, Inc. See details on methods in Appendix B.

6. Youth Health Risk Factor Profile

This profile presents estimates of health risks for youth age 10-14 and 14-19. The indicators in this profile are estimates based on analysis of data from the Virginia Youth Risk Behavioral Surveillance System from the Centers for Disease Control (2013) and demographic data from Alteryx, Inc. (see *Appendix B* for details on methods.) Please note that all indicators in this profile are estimates, and are subject to estimation error.

- As shown in *Exhibit 6,* substantial numbers of youth have lifestyle health risks related to nutrition, weight, alcohol, mental health, physical inactivity, and tobacco. For example,
    - Only an estimated 1,050 youth age 14-19 (8%) and 2,728 youth age 10-14 (25%) met the guidelines for fruit and vegetable intake;
    - An estimated 3,761 youth age 14-19 (29%) are overweight or obese; and
    - An estimated 7,168 youth age 14-19 (55%) and 7,312 youth age 10-14 (66%) did not meet the guidelines for physical activity.

Exhibit 6. Youth Health Risk Factor Profile (2014 Estimates)

Indicator		Virginia	Study Region
Estimates-Counts			
High School Youth Age 14-19			
Total Estimated High School Youth Age 14-19		*654,462*	*12,960*
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	54,707	1,050
	Overweight or Obese	179,050	3,761
	Not Meeting Recommendations for Physical Activity in the Past Week	363,586	7,168
	Used Tobacco in the Past 30 Days	118,572	2,346
	Have at least One Drink of Alcohol At least One Day in the Past 30 Days	178,173	3,486
General Health Status	Feel Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	165,270	3,091
Middle School Youth Age 10-14			
Total Estimated Middle School Youth Age 10-14		*523,850*	*11,104*
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	125,285	2,728
	Not Meeting Recommendations for Physical Activity in the Past Week	345,407	7,312
	Used Tobacco in the Past 30 Days	19,192	429
Estimates-Percent			
High School Youth Age 14-19			
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	8%	8%
	Overweight or Obese	27%	29%
	Not Meeting Recommendations for Physical Activity in the Past Week	56%	55%
	Used Tobacco in the Past 30 Days	18%	18%
	Have at least One Drink of Alcohol At least One Day in the Past 30 Days	27%	27%
General Health Status	Feel Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	25%	24%
Middle School Youth Age 10-14			
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	24%	25%
	Not Meeting Recommendations for Physical Activity in the Past Week	66%	66%
	Used Tobacco in the Past 30 Days	4%	4%
Note: State-level estimates are provided for reference only, and direct comparisons of local estimates with state estimates are not recommended.			
Source: Estimates produced by Community Health Solutions using Virginia Youth Risk Behavioral Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B. Data Sources for details.			

7. Uninsured Profile

This profile presents estimates of the uninsured population within the 0-64 age group. The indicators in this profile are estimates based on analysis of data from the U.S. Census Bureau Small Area Health Insurance Estimates and demographic estimates from Alteryx, Inc. (see *Appendix B* for details on methods.) Please note that all indicators in this profile are subject to estimation error. Also, because of limitations in the data it is not possible to calculate the statistical significance of differences between local rates and state rates. See *Appendix B* for details.

As shown in *Exhibit 7:*

- At any given point in 2014, an estimated 19,098 residents age 0-64 of the study region were uninsured.
- The estimated number of uninsured children age 0-18 in the study region was 2,459. Among uninsured children, it is estimated that 44% have family income below 200 percent of the federal poverty level, possibly making them income-eligible for coverage through the state Medicaid or FAMIS program.
- The estimated number of uninsured adults age 19-64 was in the study region was 16,638. Among uninsured adults, it is estimated that 53% have family income below 200 percent of the federal poverty level.

Exhibit 7. Uninsured Profile (2014 Estimates)

Indicator	Virginia	Study Region
Estimated Uninsured Counts*		
Uninsured Nonelderly Age 0-64	1,013,986	19,098
Uninsured Children Age 0-18	120,105	2,459
Uninsured Children Age 0-18 <=138% FPL	38,955	696
Uninsured Children Age 0-18 <=200% FPL	60,293	1,085
Uninsured Children Age 0-18 <=250% FPL	74,045	1,347
Uninsured Children Age 0-18 <=400% FPL	98,441	1,876
Uninsured Children Age 0-18 138-400% FPL	59,485	1,180
Uninsured Adults Age 19-64	893,456	16,638
Uninsured Adults Age 19-64 <=138% FPL	327,185	6,158
Uninsured Adults Age 19-64 <=200% FPL	479,797	8,848
Uninsured Adults Age 19-64 <=250% FPL	578,328	10,620
Uninsured Adults Age 19-64 <=400% FPL	749,463	13,948
Uninsured Adults Age 19-64 138-400% FPL	422,276	7,787
Estimated Uninsured Percent		
Uninsured Children Percent	6%	6%
Uninsured Adults Percent	17%	16%

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

Source: Estimates produced by Community Health Solutions using U.S. Census Bureau Small Area Health Insurance Estimates (2013) and local demographic estimates from Alteryx, Inc. See Appendix B for details on methods.

8. Cancer Profile

This profile presents indicators of cancer counts for the study region and Virginia. The indicators are based on analysis of cancer registry and death record data provided by the Virginia Department of Health. (see *Appendix B* for details on methods.)

As shown in *Exhibit 8A*:

- From 2008-2012, there were 4,387 residents diagnosed with cancer in the study region.
- The five leading sites of cancer were Lung and Bronchus; Breast (among females only); Prostate; Colorectal; and Melanoma.

As shown in *Exhibit 8B*:

- From 2009-2013, there were 1,850 cancer deaths in the study region.
- The five leading sites for cancer deaths in the study region were Lung and Bronchus; Colorectal; Breast (female only); Prostate; and Ovarian.

Exhibit 8A. Cancer Incidence by Site (2008-2012)

Indicator	Virginia	Study Region
Counts		
2008-2012 Cancer Incidence -All Sites	183,650	4,387
2008-2012 Diagnosed at Local Stage-All Sites	82,981	1,899
2008-2012 Cancer Incidence -Lung and Bronchus	26,509	670
2008-2012 Diagnosed at Local Stage-Lung and Bronchus	5,021	84
2008-2012 Cancer Incidence -Breast (Female Only)	28,621	660
2008-2012 Diagnosed at Local Stage-Breast (Female Only)	17,948	389
2008-2012 Cancer Incidence -Prostate	25,706	645
2008-2012 Diagnosed at Local Stage-Prostate	20,549	518
2008-2012 Cancer Incidence -Colorectal	16,015	403
2008-2012 Diagnosed at Local Stage-Colorectal	6,266	125
2008-2012 Cancer Incidence -Melanoma	7,673	167
2008-2012 Diagnosed at Local Stage-Melanoma	5,601	135
2008-2012 Cancer Incidence -Oral Cavity	4,550	73
2008-2012 Diagnosed at Local Stage-Oral Cavity	1,353	11
2008-2012 Cancer Incidence -Ovarian	2,698	43
2008-2012 Diagnosed at Local Stage-Ovarian	388	0
2008-2012 Cancer Incidence -Cervical	1,337	16
2008-2012 Diagnosed at Local Stage-Cervical	620	0
Notes: Rates are not provided because data to calculate rates are not readily available. There may be cases in the study region where the diagnosis stage is unknown.		
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix B for methods details.		

Exhibit 8B. Cancer Deaths by Site (2009-2013)

Indicator*	Virginia	Study Region
Counts		
Five Year Total (2009-2013) Cancer Deaths, All Sites	70,846	1,850
Five Year Total (2009-2013) Cancer Deaths, Lung and Bronchus	19,765	473
Five Year Total (2009-2013) Cancer Deaths, Colorectal	6,021	176
Five Year Total (2009-2013) Cancer Deaths, Breast (Female Only)	5,252	164
Five Year Total (2009-2013) Cancer Deaths, Prostate	3,451	121
Five Year Total (2009-2013) Cancer Deaths, Ovarian	1,799	39
Five Year Total (2009-2013) Cancer Deaths, Oral Cavity	1,008	30
Five Year Total (2009-2013) Cancer Deaths, Melanoma	1,194	20
Five Year Total (2009-2013) Cancer Deaths, Cervical	400	7
Note: Rates are not provided because data to calculate rates are not readily available.		
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix B for methods details.		

9. Communicable Disease Profile

This profile presents indicators of communicable disease counts and rates for the study region and Virginia. The indicators are based on analysis of the communicable disease annual reports by the Virginia Department of Health. (see *Appendix B* for details on methods.) As shown in *Exhibit 9:*

- In 2014, there were 985 cases of Chlamydia, 266 cases of Gonorrhea, 32 new cases of HIV, and 14 cases of Early Syphilis.
- The study region had a higher (worse) rate of disease than Virginia as a whole for Chlamydia, Gonorrhea, and HIV.

Exhibit 9. Selected Communicable Disease Profile (2014)

Indicator	Virginia	Study Region
Counts		
Chlamydia Diagnoses	35,473	985
Gonorrhea Diagnoses	8,128	266
Newly Diagnosed Cases of HIV Disease	940	32
Total Early Syphilis Diagnoses	545	14
Crude Rates per 100,000 Population		
Chlamydia Diagnoses (rate per 100,000)	429.4	590.8
Gonorrhea Diagnoses (rate per 100,000)	98.4	159.5
Newly Diagnosed Cases of HIV Disease (rate per 100,000)	11.4	19.2
Total Early Syphilis Diagnoses (rate per 100,000)	6.6	--
Note: Rates are not calculated where n<30.		
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix B for methods details.		

APPENDIX A: Zip Code-Level Maps

The Zip Code-Level maps in this section illustrate the geographic distribution of the zip code-level study region on key health status indicators. The maps in this section include the following for 2013/2014:

1. Total Deaths, 2013	9. Estimated Adult Age 18+ Smokers, 2014
2. Heart Disease Deaths, 2013	10. Estimated Adults Age 18+ with No Dental Visit in the Last Year, 2014
3. Cerebrovascular Disease (Stroke) Deaths, 2013	11. Estimated Adults Age 18+ with Diabetes, 2014
4. Malignant Neoplasms (Cancer) Deaths, 2013	12. Estimated Adults Age 18+ who are Overweight or Obese, 2014
5. Total Live Births, 2013	13. Estimated High School-aged Youth (age 14-19) who are Overweight or Obese, 2014
6. Total Teenage Live Births (age<18), 2013	14. Estimated Uninsured Children Age 0-18, 2014
7. Total Prevention Quality Indicator Hospitalization Discharges, 2013	15. Estimated Uninsured Adults, Age 19-64, 2014
8. Total Behavioral Health Hospitalization Discharges, 2013	Map Table

Technical Notes

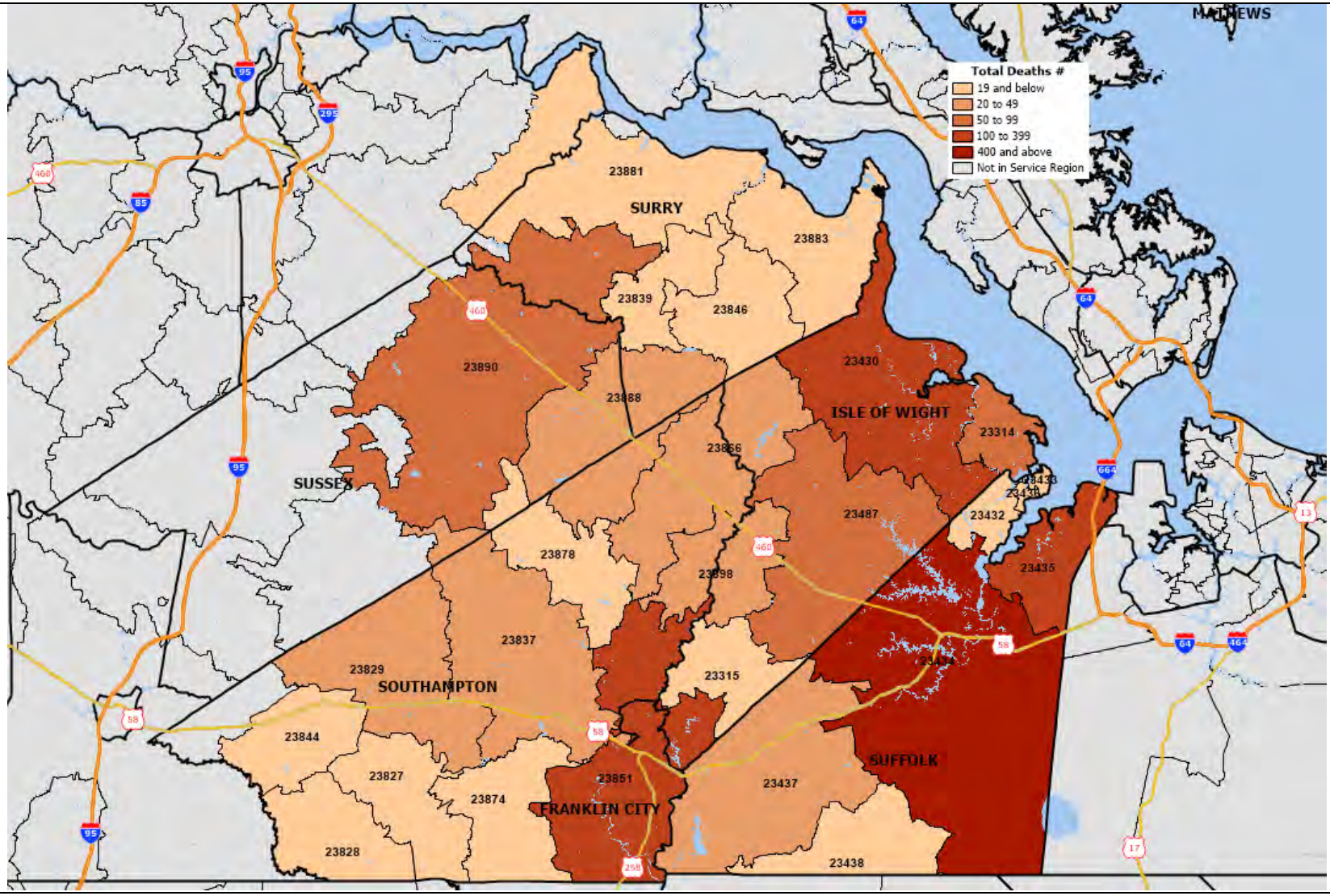
1. The maps and data include 27 zip codes, as identified by Sentara Obici Hospital, most of which fall within the cities of Suffolk and Franklin; and the counties of Isle of Wight, Southampton, Surry and Sussex. It is important to note that zip code boundaries do not automatically align with city/county boundaries, and there are some zip codes that extend beyond the county boundaries. Zip codes that solely contain special populations (e.g. military installations, colleges) were excluded from the Zip Code-Level Study Region. Consequently, the combined zip-code-level totals for the maps differ from the study region totals listed throughout the body of the report.

2. 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 natural breaks.

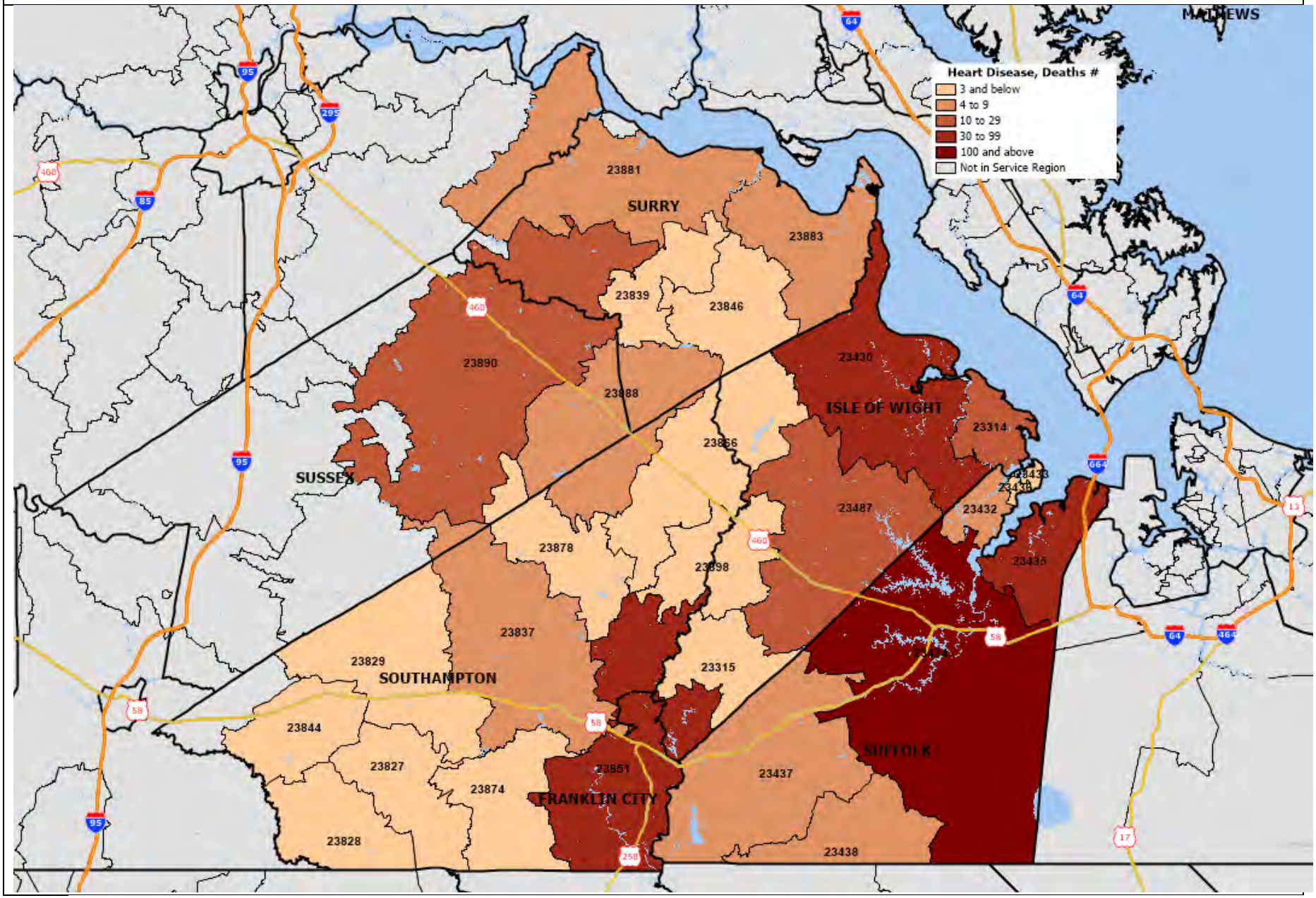
4. Zip Code-Level Study Region zip codes with zero values are noted.

Map 1: Total Deaths, 2013



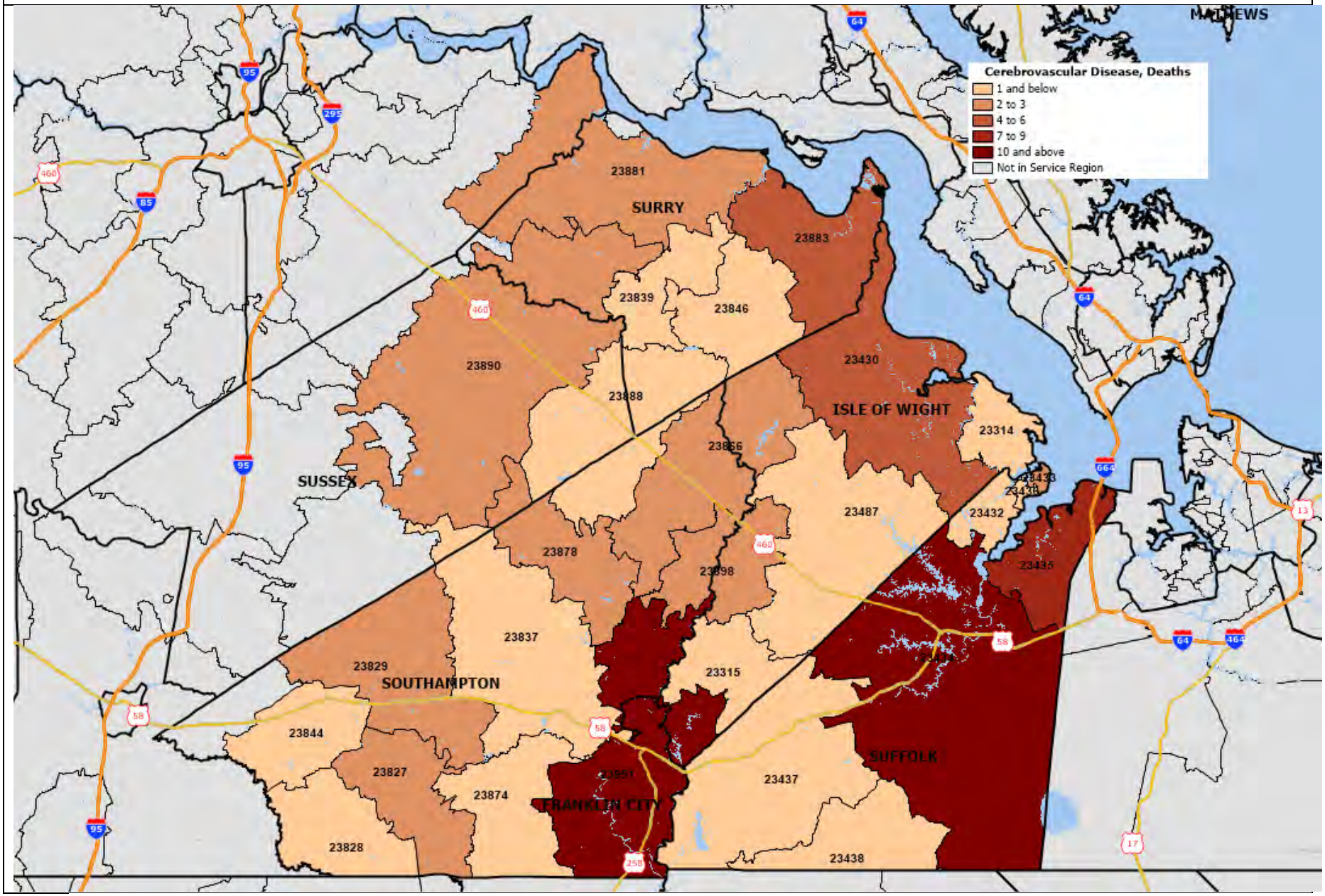
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

Map 2: Heart Disease Deaths, 2013



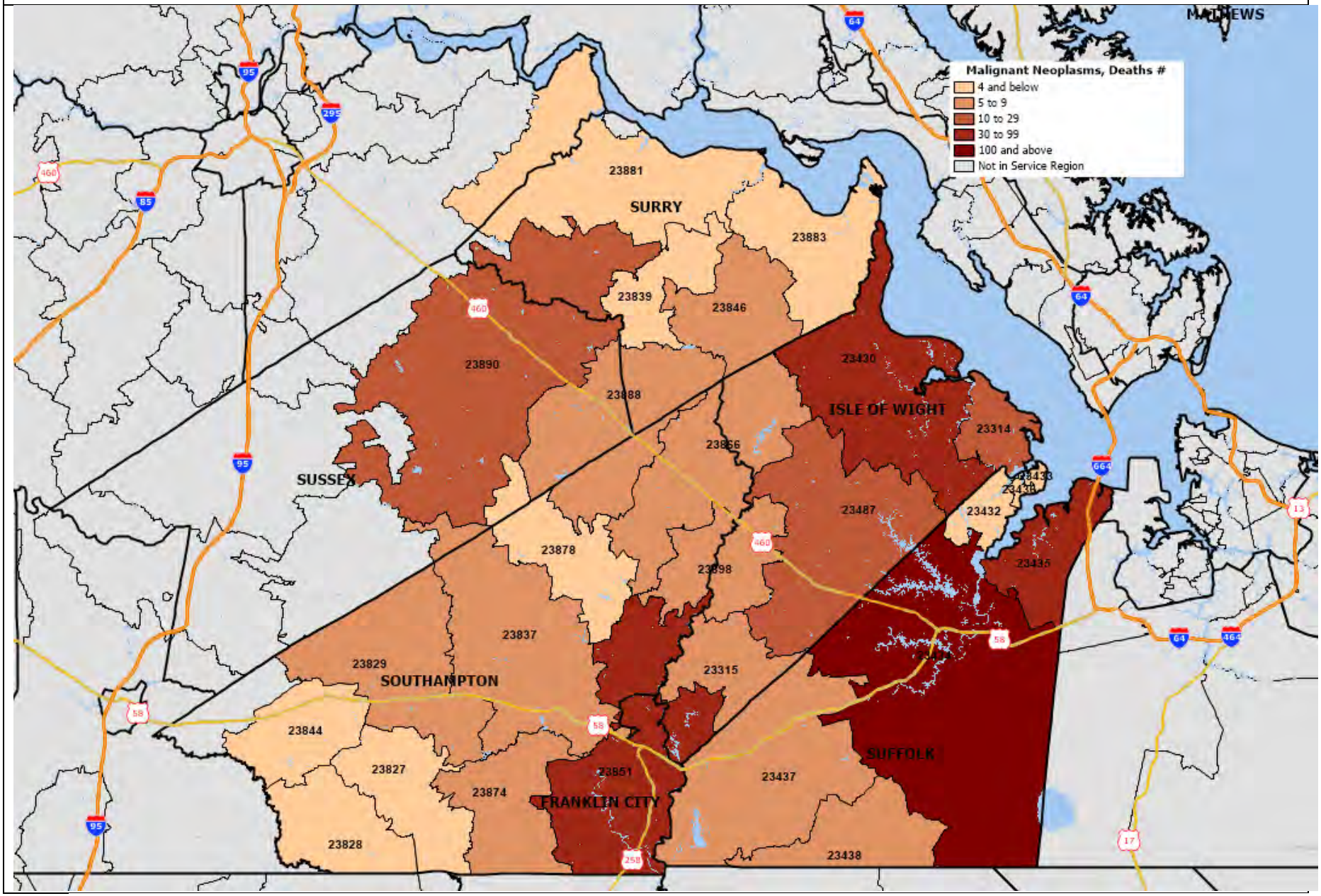
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

Map 3: Cerebrovascular Disease (Stroke) Deaths, 2013



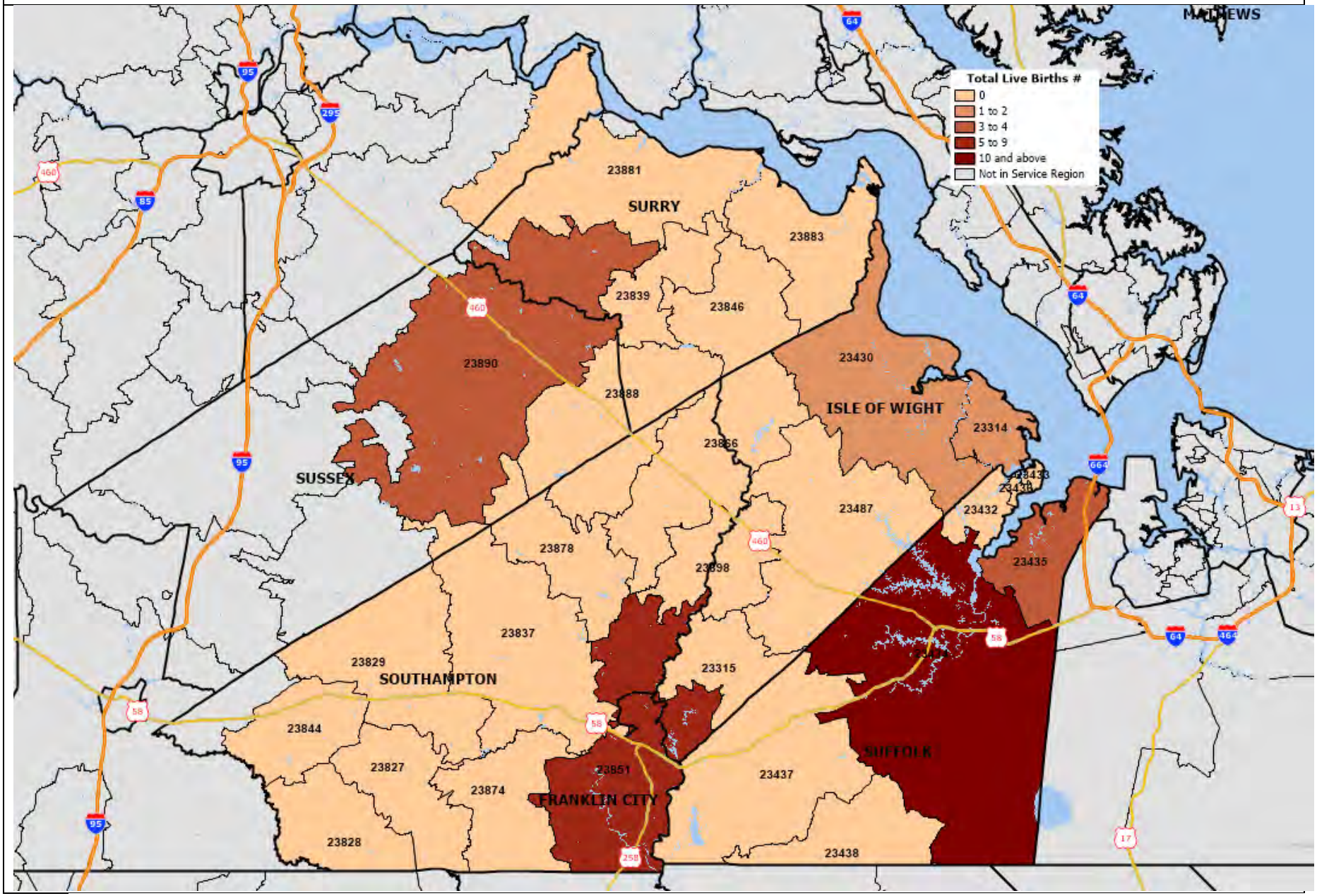
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported stroke deaths for zip codes 23314, 23432, 23436, 23437, 23438, 23828, 23837, 23839, 23844, 23846, and 23874.

Map 4: Malignant Neoplasms (Cancer) Deaths, 2013



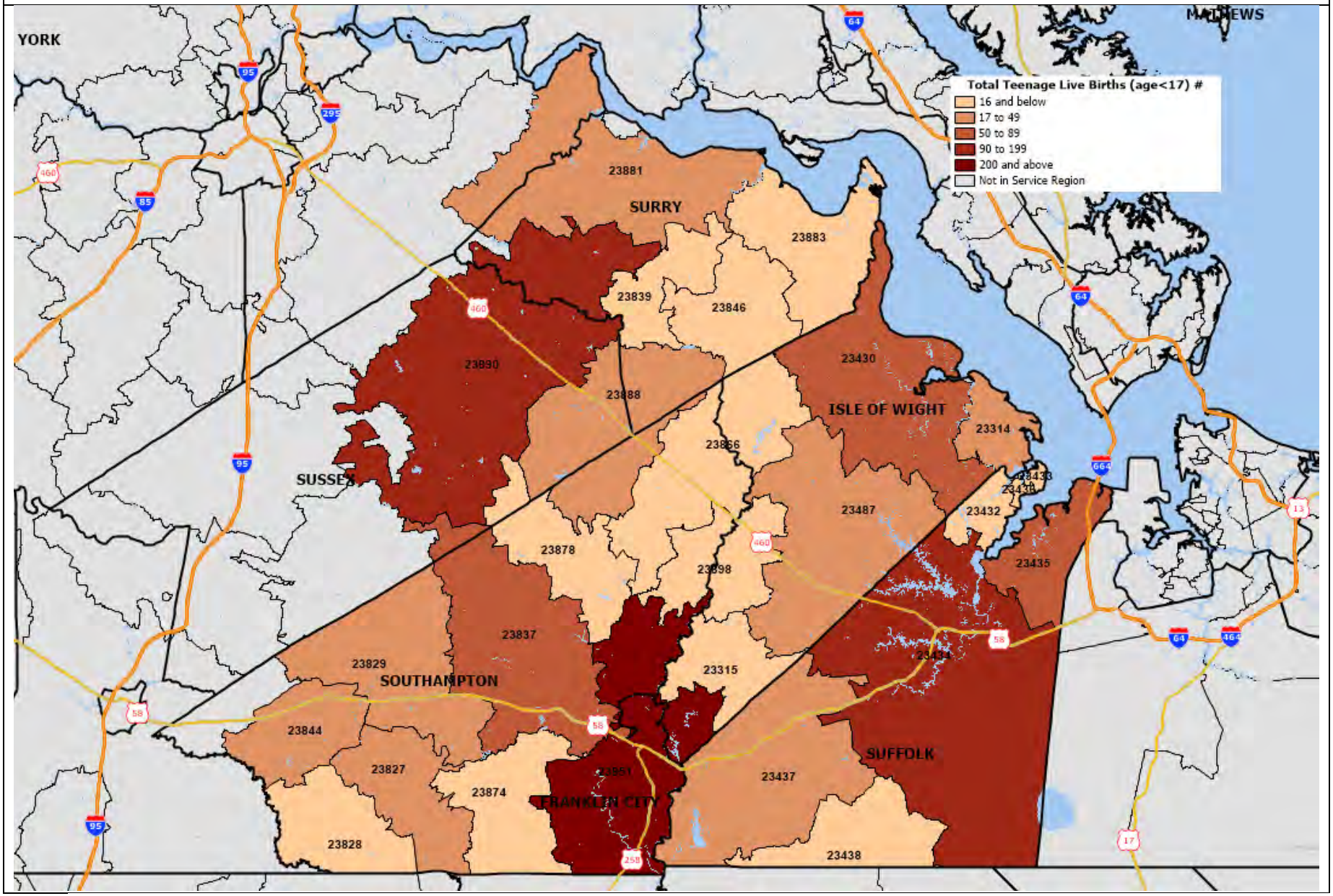
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported cancer deaths for zip codes 23828 and 23839.

Map 5: Total Live Births, 2013



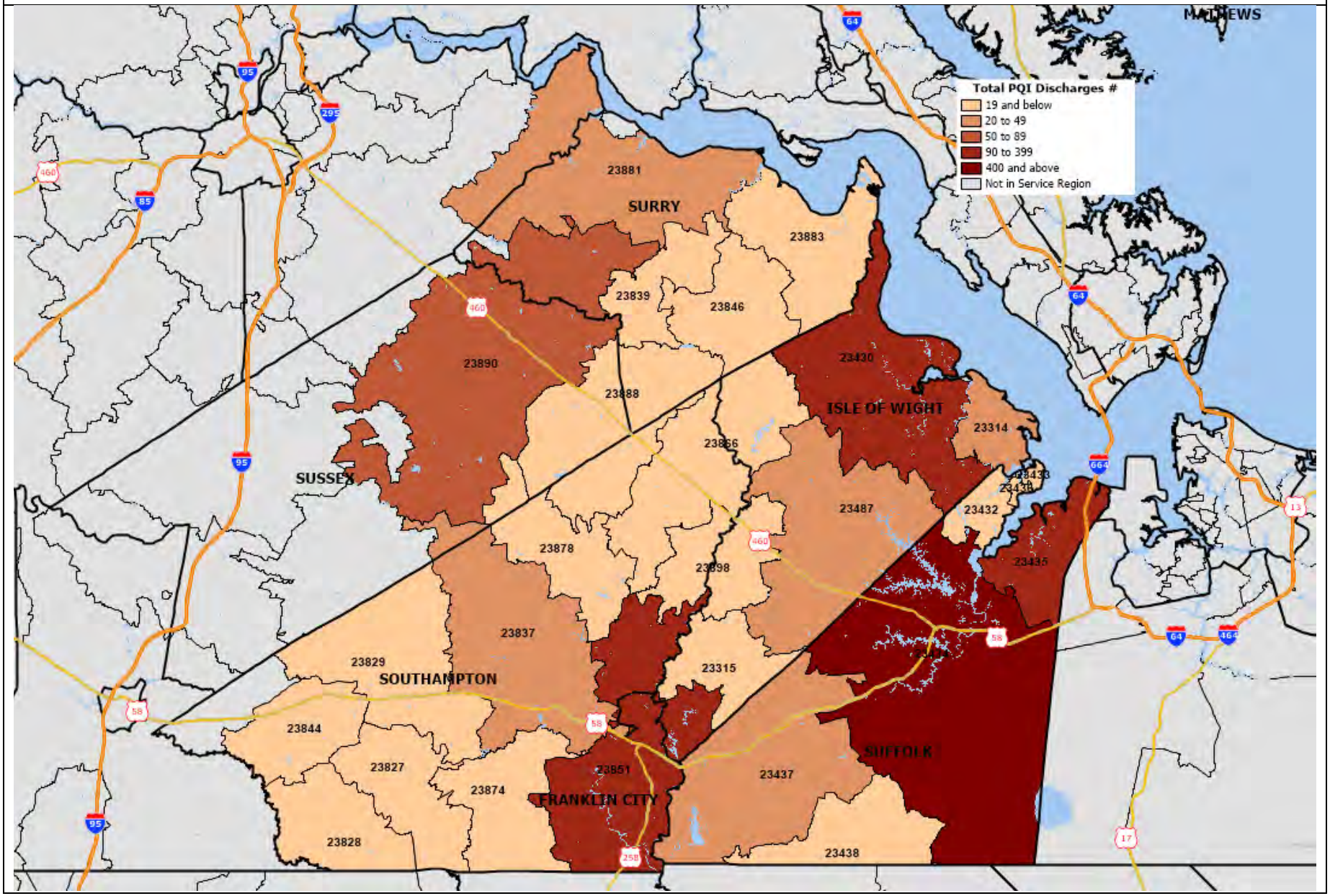
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B.

Map 6: Total Teenage Live Births (age <18), 2013



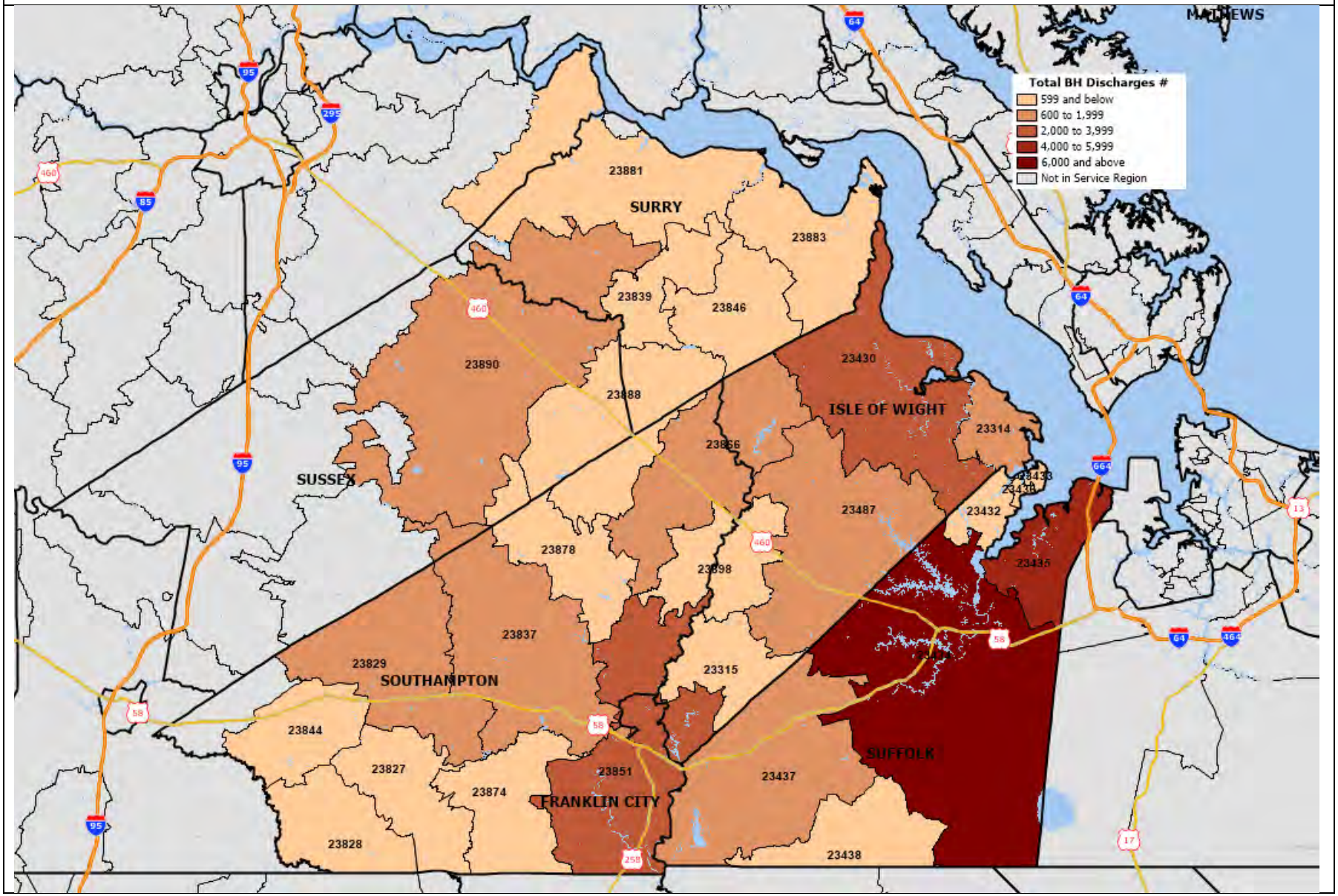
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported teenage live births for zip codes 23315, 23432, 23433, 23436, 23437, 23438, 23487, 23827, 23828, 23829, 23837, 23839, 23844, 23846, 23866, 23874, 23878, 23881, 23883, 23888, and 23898.

Map 7: Total Prevention Quality Indicator (PQI) Hospitalization Discharges, 2013



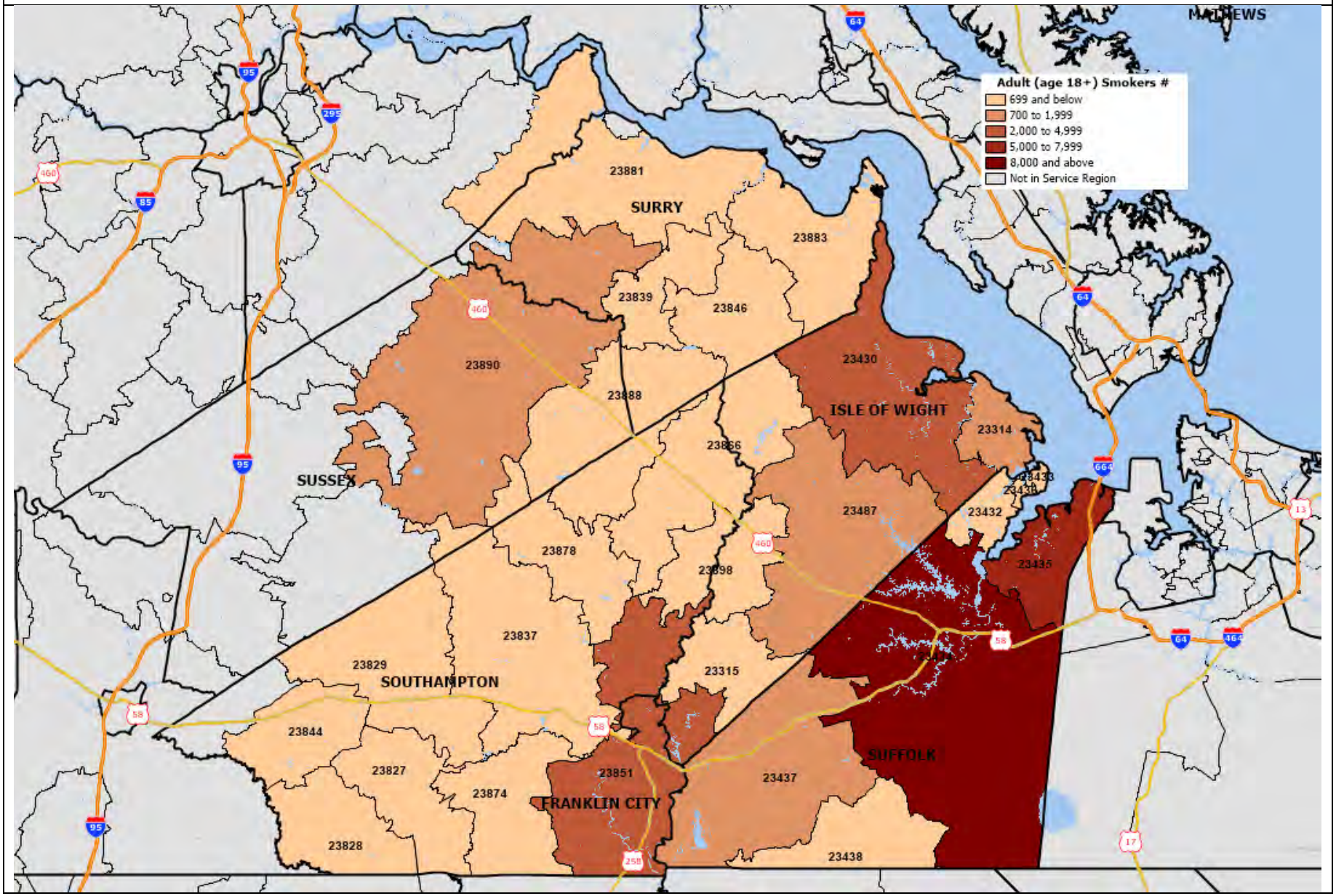
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B. Notes: There were no reported Prevention Quality Indicator Hospital Discharges for zip codes 23436.

Map 8: Total Behavioral Health (BH) Hospitalization Discharges, 2013



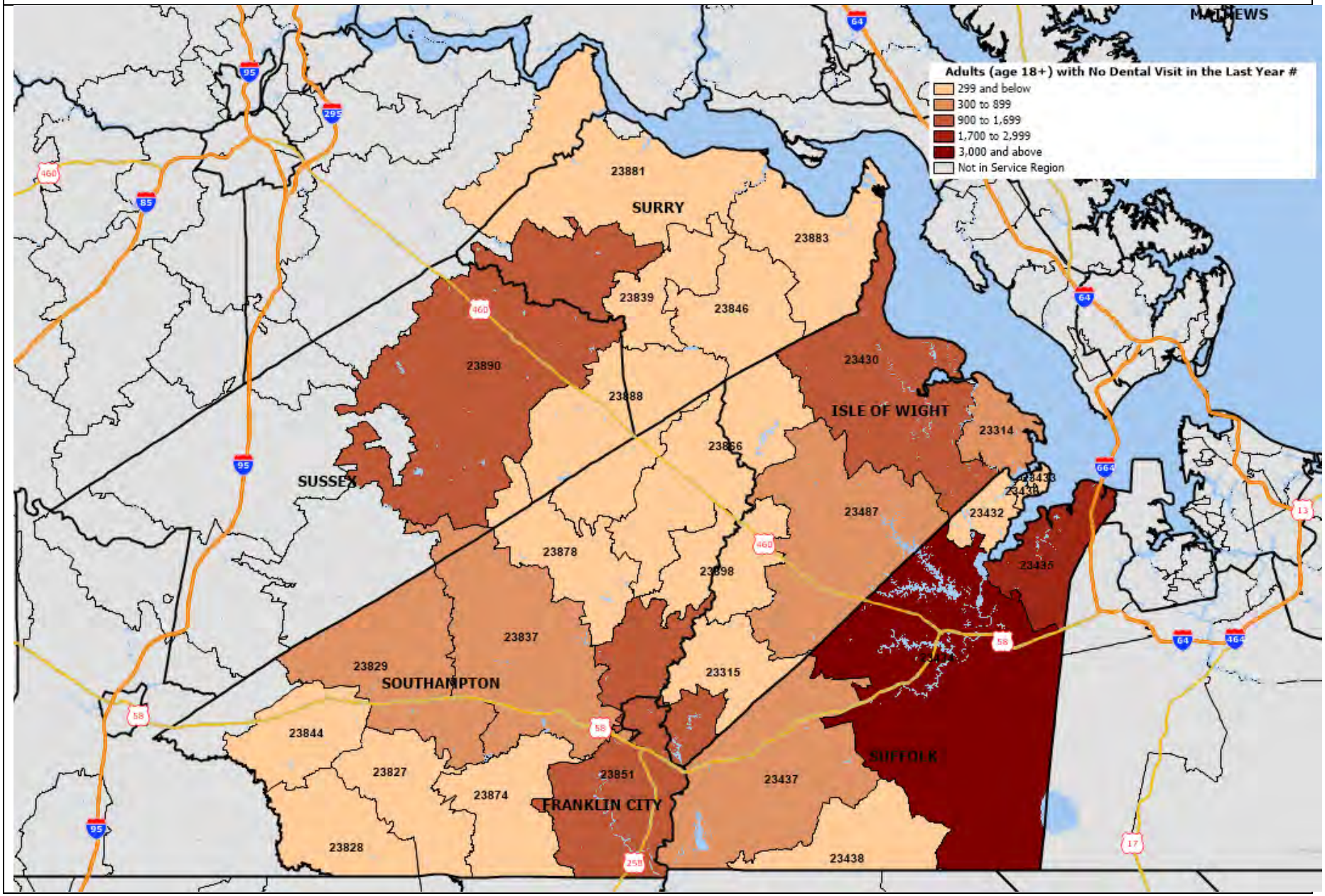
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B. There were no reported Behavioral Health discharges for zip codes 23828 and 23846. *Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.*

Map 9: Estimated Adults Age 18+ Smokers, 2014-Estimates



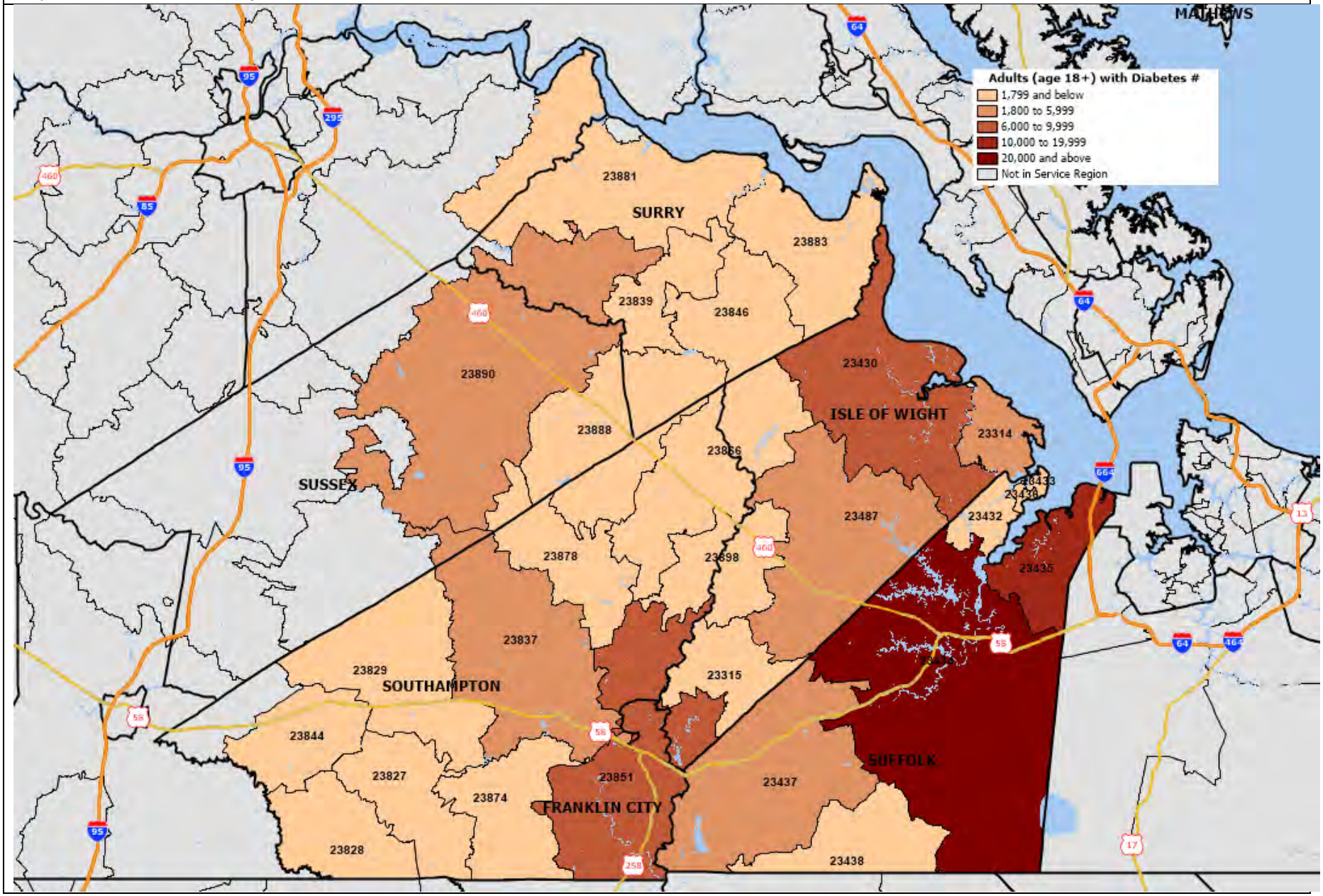
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

Map 10: Estimated Adults Age 18+ with No Dental Visit in the Last Year, 2014-Estimates



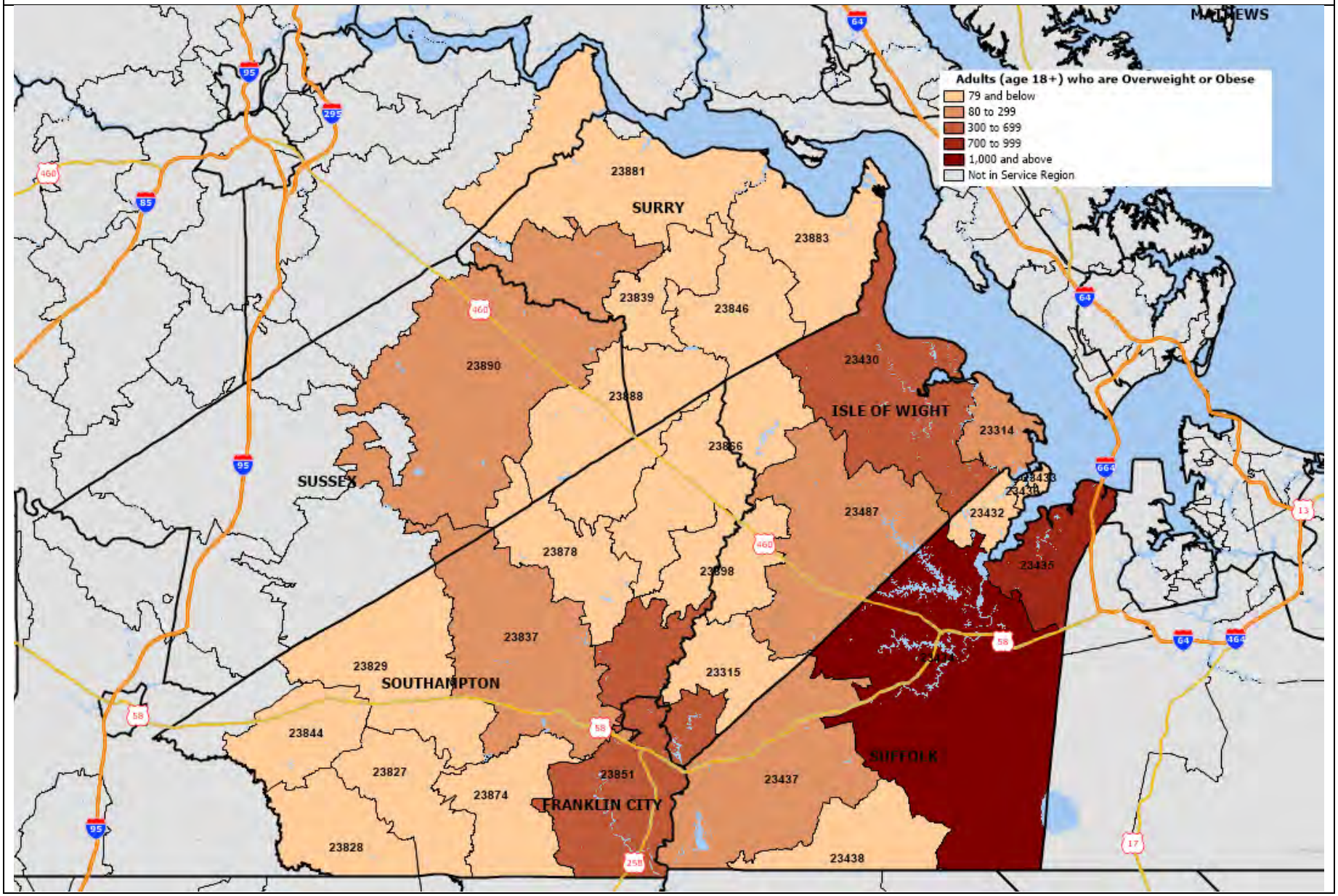
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

Map 11: Estimated Adults Age 18+ with Diabetes, 2014 -Estimates



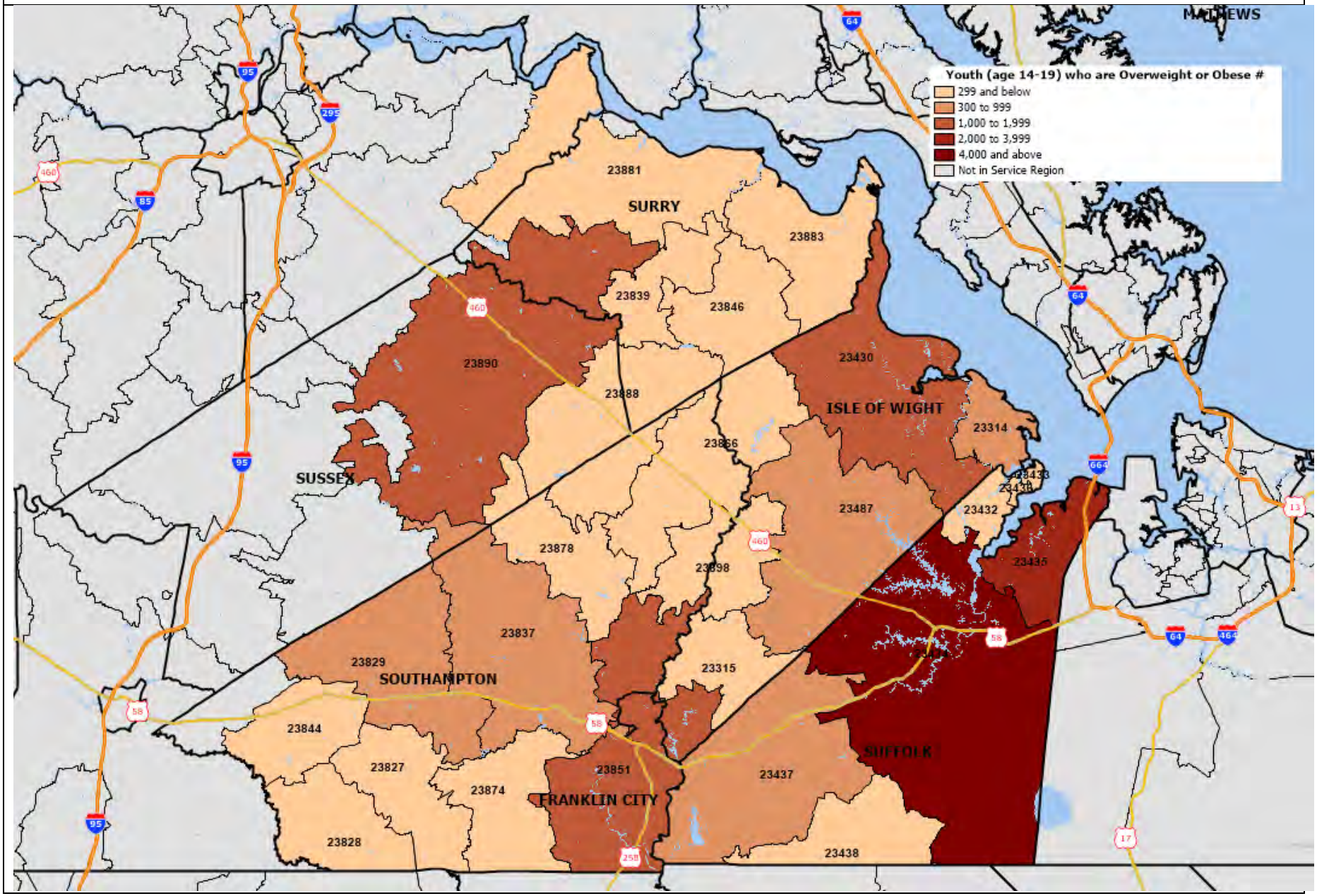
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

Map 12: Estimated Adults Age 18+ who are Overweight or Obese, 2014-Estimates



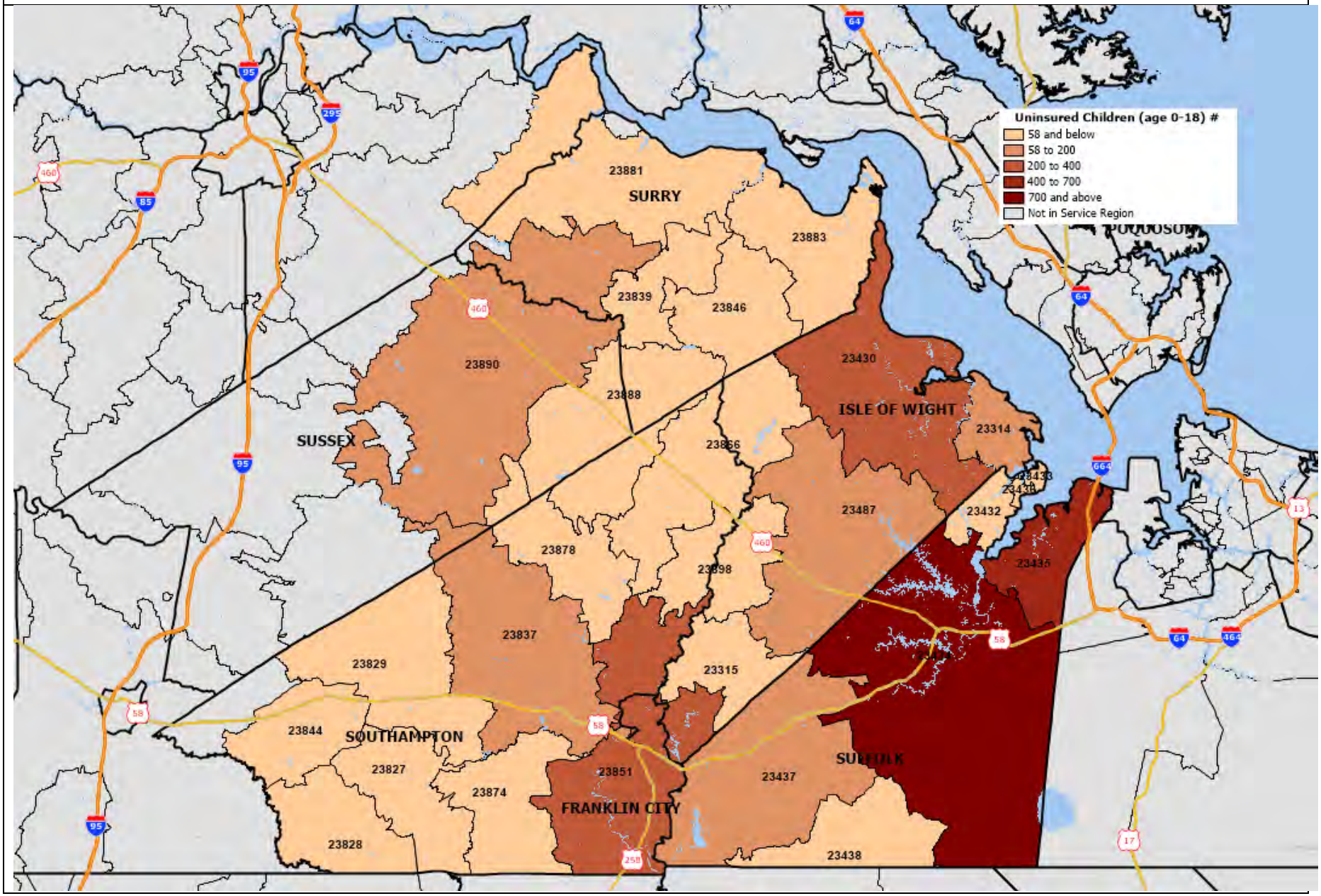
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B.

Map 13: Estimated High School-aged Youth (age 14-19) who are Overweight or Obese, 2014-Estimates



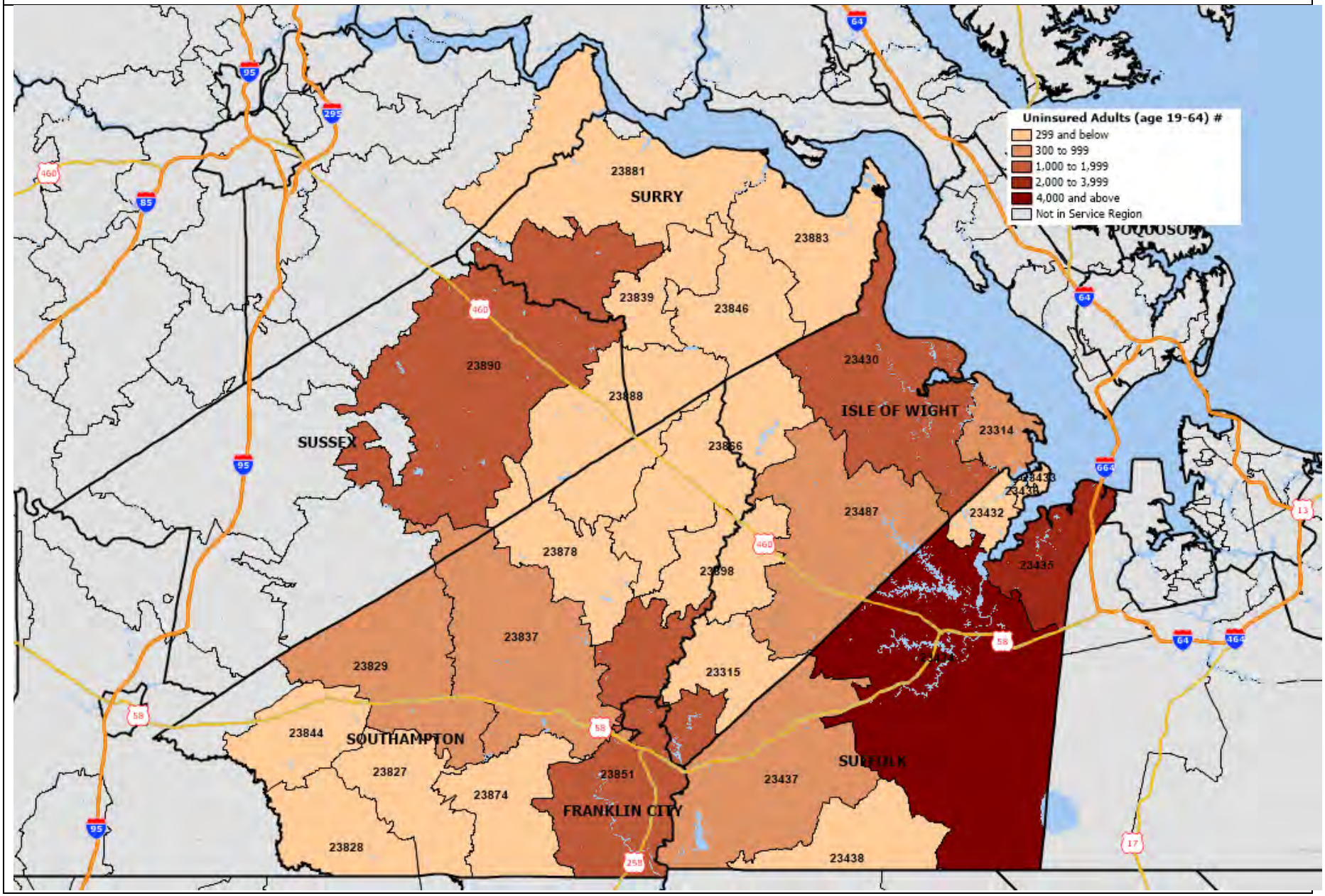
Source: Estimates produced by Community Health Solutions using Virginia Youth Risk Behavioral Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B. Data Sources for details.

Map 14: Estimated Uninsured Children, Age 0-18, 2014-Estimates



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

Map 15: Estimated Uninsured Adults, Age 19-64, 2014 -Estimates



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

APPENDIX B: Health Status Indicators Data Sources

Profile	Source
Important Note on Data Sources	The data used to produce the health status indicators in this report were obtained from public or commercial sources as indicated throughout this appendix. Community Health Solutions cannot, and does not guarantee the accuracy of these data sources.
1) Mortality Profile (also Appendix A. Maps 1-4)	Community Health Solutions analysis of Virginia Department of Health data (2011-2013). Locality-Level counts and rates were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
2) Maternal and Infant Health Profile (also Appendix A. Maps 5-6)	Community Health Solutions analysis of Virginia Department of Health data (2011-2013). Locality-Level counts and rates were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
3) Preventable Hospitalization Profile (also Appendix A. Map 7) 4) Behavioral Health Hospitalization Profile (also Appendix A. Map 8)	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2011-013 datasets and demographic estimates from Alteryx, Inc. (2011-2013). Data include discharges for Virginia residents from Virginia hospitals reporting to Virginia Health Information, Inc.) The analysis includes records of discharges of Virginia residents from Virginia hospitals excluding state and federal facilities. **Preventable Hospitalizations**. The prevention quality indicator (PQI) definitions are based on definitions published by the Agency for Healthcare Research and Quality (AHRQ). The definitions are detailed in their specification of ICD-9 diagnosis codes and procedure codes. Not every hospital admission for congestive heart failure, bacterial pneumonia, etc. is included in the PQI definition; only those meeting the detailed specifications. Low birth weight is one of the PQI indicators, but for the purpose of this report, low birth weight is included in the Maternal and Infant Health Profile. Also, there are four diabetes-related PQI indicators which have been combined into one for the report. Within the Exhibits, the *All PQI Discharges* figures are based on an AHRQ methodology that counts a hospital discharge with multiple PQI diagnoses as one discharge. By comparison, the figures for individual discharges do include a small number of cases in which a single hospital discharge with more than one PQI diagnosis would be counted more than once. Also, AHRQ refined their method to exclude the perforated appendix PQI from its list, but this diagnosis is included in the data used for this study. As a result of these methodological factors, the sum of the individual PQI discharges may be slightly different than the total for All PQI Discharges. These differences or on the order of less than one percent. For more information on the AHRQ methodology, visit the AHRQ website at http://www.qualityindicators.ahrq.gov/modules/pqi_resources.aspx **Behavioral Health Hospitalizations-** Behavioral health data reported are based on the patient's primary diagnosis. Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, the analysis in this profile does not include data for residents age 0-17. *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.*

Profile	Source
5) Adult Health Risk Factor Profile (also Appendix A. Maps 9-12)	Estimates of chronic disease and risk behaviors for adults 18+ were produced by Community Health Solutions using: • A multi-year dataset (2006-2010) from the Virginia Behavioral Risk Factor Surveillance System (BRFSS). For more information on BRFSS visit: http://www.cdc.gov/brfss/about/index.htm • Local demographic estimates from Alteryx, Inc. (2014) Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. In this model, state-level data were used to predict local counts and rates, with adjustments for local demographics. Consequently, differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are provided for reference only, and direct comparisons of local estimates with state estimates are not recommended. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. Likewise, it is not possible to calculate the statistical significance of differences between local rates and state rates.
6) Youth Health Risk Factor Profile (also Appendix A. Map 13)	Estimates of risk behaviors for youth age 14-19 and 10-14 were produced by Community Health Solutions using: • Data from the Virginia Youth Risk Behavioral Surveillance System from the Centers for Disease Control (2013). For more information on YRBSS visit: http://www.cdc.gov/HealthyYouth/yrbs/index.htm • Local demographic estimates from Alteryx, Inc. (2014). Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. In this model, state-level data were used to predict local counts and rates, with adjustments for local demographics. Consequently, differences between local rates and state rates may reflect estimation error rather than valid differences. Therefore, state-level estimates are provided for reference only, and direct comparisons of local estimates with state estimates are not recommended. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. Likewise, it is not possible to calculate the statistical significance of differences between local rates and state rates.
7) Uninsured Profile (also Appendix A. Maps 14-15)	Estimates of uninsured nonelderly age 0-64 were produced by Community Health Solutions using: • U.S. Census Bureau Small Area Health Insurance Estimates (2013). For more information, visit: http://www.census.gov/did/www/sahie/data/index.html. • Local demographic estimates from Alteryx, Inc. (2014) Estimates are used when there are no primary sources of data available at the local level. The estimates are for planning purposes only and are not guaranteed for accuracy. The statistical model to produce the local estimates was developed by Community Health Solutions. In this model, prior year locality-level rates were used to predict current year counts and rates, with adjustments for local demographics. Because of data limitations, it is not possible to assign specific margins of error or levels of significance to these statistical estimates. Likewise, it is not possible to calculate the statistical significance of differences between local rates and state rates. Additionally, populations in group living quarters (e.g. colleges) and undocumented populations may not be adequately addressed in this model.

Profile	Source
8) Cancer Profile	Community Health Solutions analysis of: • 2009-2013 (five-year total for cancer data by site) Virginia Department of Health death record data; and • 2008-2012 (five-year total for cancer data by site) Virginia Department of Health Cancer Registry data.
9) Communicable Disease Profile	Community Health Solutions analysis of 2014 Virginia Department of Health annual surveillance report data.

Community Insight

The community insight component of this CHNA consisted of two methodologies: an online Community Stakeholder Survey carried by the Sentara Strategy Department and a series of more in-depth Community Focus Groups carried out by the hospital.

The Community Stakeholder Survey was conducted jointly with all Sentara hospitals in South Hampton Roads due to the proximity of the hospitals and the wide variety of community stakeholders that work with multiple hospitals throughout the region. The survey tool was similar to but expanded from the survey utilized for the 2013 CHNA. The expansion was a result of a community collaborative effort. The survey was conducted using Survey Monkey, an online survey service, in June 2016. Stakeholders were invited to participate by email and were sent the link to open the survey. They were asked to identify the hospitals they work with and their answers were included with each hospital identified. Invitations were based on the recipients' employment or community engagement, community history, and knowledge. A wide-variety of stakeholders were sought, including representative from public health departments, social services, emergency services, healthcare providers, elected or non-elected government officials, representatives of underserved and/or minority populations, consumers of services, and others.

The survey contained questions on:

- The most important health problems in the community
- Community services that need strengthening
- Vulnerable/at-risk populations in the community
- Existing health assets within the community
- Health assets needed in the community
- Additional ideas of suggestions for improving community health

Across the region, 458 invitations were sent, and 121 individual stakeholders completed the survey. For Sentara Obici Hospital, 38% of overall South Hampton Roads survey respondents indicated they work with the hospital, which includes 46 individual stakeholders. The survey results that follow are limited to these responses. Note that not all participants answered every question.

Community Focus Group Sessions were carried out by the hospital to gain more in-depth insight from community stakeholders. The questions below were utilized. The results of the focus groups are presented after the survey results.

- What are the most serious health problems in our community?
- Who/what groups of individuals are most impacted by these problems?
- What keeps people from being healthy? In other words, what are the barriers to achieving good health?
- What is being done in our community to improve health and to reduce the barriers? What resources exist in the community?
- What more can be done to improve health, particularly for those individuals and groups most in need?

Community Stakeholder Survey Results

The results of the 2016 Community Stakeholder Survey for Sentara Obici Hospital are displayed on the following pages in table form. First, the list of community stakeholders participating in the survey are displayed below.

Sentara Obici Hospital - Community Stakeholder Survey Participants by Organization	
Access Partnership	RG Electric Company, Inc
American Cancer Society	Senior Services of Southeastern Virginia
American Heart Association	Sentara Health Plans, Optima Health
Bon Secours Health System	Sentara Family Medicine Physicians (SFMP)
Chesapeake Integrated Behavioral Healthcare	Sentara Medical Group (SMG)
Chesapeake Regional Medical Center	South University
Cross Realty	Southeastern Virginia Health System
ECPI University, MSN Program	Suffolk Christian Church
Emergency Physicians of Tidewater (EPT)	Suffolk Department of Social Services
Eastern Virginia Medical School (EVMS)	Suffolk Parks and Recreation
First Baptist Church, Mahan Street	TBE
Foodbank of Southeastern VA	The Planning Council
Hubbard Peanut Company	Tidewater Community College
Isle of Wight County Schools, VA	Virginia Oral Health Coalition
LifeNet	Virginia Supportive Housing
March of Dimes	Western Tidewater Free Clinic
Norfolk Community Services Board	Western Tidewater Community Services Board (WTCSB)
Obici Healthcare Foundation	YMCA of South Hampton Roads
Old Dominion University School of Dental Hygiene	Not provided
Paul D. Camp Community College	

Community Health Concerns

Survey participants were asked, “What are the most important health problems in your community?” Thirty-four choices were included in the survey; the number of choices each person could select was not restricted or ranked. The frequency of the health problems chosen are displayed below, followed by open-ended responses or additional comments submitted by the participants. Responses are ranked in order of the frequency identified; when counts equaled, the same rank is provided for those selections. Forty-five participants responded to this question.

Frequency Rank	2016 Most Important Health Problem in Community	% of Participants Selecting Item
1	Diabetes	82%
	Mental Health - Behavioral Health Conditions (e.g. depression, anxiety, etc.)	82%
3	Obesity	80%
4	High Blood Pressure / Hypertension	69%
5	Heart Disease	58%
6	Alcohol Use	53%
	Substance Abuse (prescription or illegal drugs)	53%
8	Tobacco Use	51%
9	Cancer	49%
	Dental / Oral Health Care	49%
11	Dementia / Alzheimer's Disease	47%
12	Infant and Child Health	44%
13	Accidents / Injuries	40%
	Violence - Domestic Violence	40%
15	Chronic Pain	38%
	Physical Disabilities	38%
17	Respiratory Diseases (e.g. asthma, COPD, etc.)	36%
	Violence - Other than Domestic Violence	36%
19	Orthopedic Problems	33%
	Teen Pregnancy	33%
21	Intellectual / Developmental Disabilities	31%
	Sexually Transmitted Diseases	31%
23	Prenatal and Pregnancy Care	29%
	Stroke	29%
25	Renal (kidney) Disease	24%
26	Arthritis	22%
	Bullying	22%
	Hunger	22%

29	Infectious Diseases	20%
	Neurological Conditions (e.g. seizures, multiple sclerosis, traumatic brain injury, etc.)	20%
31	HIV / AIDS	18%
32	Autism	16%
33	Environmental Health (e.g. pollution, mosquito control, water quality, etc.)	11%
34	Drowning / Water Safety	9%

Diabetes and mental and behavioral health topped the most important health problems selected by community stakeholder participants, followed by obesity.

Eleven participants chose to provide additional comments to the question, “What are the most important health problems in your community?” These responses are provided below. Note responses are unedited except in the interest of confidentiality (example: participant phone number redacted).

Additional Comments
• Healthy Eating • Access to Care • Prevention and Early Detection
• Those checked are the ones I think are most effecting our local community in Suffolk.
• colon cancer
• Uninsured and under-insured status creates barriers to care for any health problems. • Access Partnership receives numerous calls each month requesting assistance to obtain DME, medical supplies and medications. Social Workers, case managers, insurance companies, hospitals, health centers, free clinics and community members need nutritional supplements, adult diapers, walkers, wheelchairs, hospital beds, shower chairs, nebulizers, CPAPs (over 100 people are waiting for these at Sentara ACC). Out of necessity, Access Partnership has been coordinating donated supplies & equipment which people want to donate (they are often told by DME and supply companies that the items are paid for and to dispose of them or give them away). Most thrift stores will not accept large items (hospital beds). FREE Foundation will accept a number of items but does not accept diapers, nutritional supplements, beds, and more. • Dental/Oral Health is a significant problem which has been shown by HR residents sleeping overnight outside Green Run HS for the Mission of Mercy project on April 30. Over 500 were provided care but more approx 150 were turned away. • Tobacco, substance abuse, alcohol use all contribute to oral health care and oral health care (lack of or poor oral health care) contributes to heart disease, kidney disease, premature birth, uncontrolled diabetes, and more health issues. • Care connection is an additional need in our communities. Life Coaches are in some EDs, case managers and social workers are in the health care sites and communities but there is a need to "link" and connect all available resources. This has been a key objective for Access Partnership.
• Transportation
• Allergies/Epi Pens • with Hunger add Homelessness • Transportation Accidents _____ • As a school division, we have the entire family health concerns . Students have their concerns but they bring these to school with other family member concerns. • We also have out staff and employees who range from age 21 - up (some over 70).

• We have an entire fleet of cars, vans , and buses that transport students and staff each day on the highways from Isle of Wight County to Suffolk, Norfolk , Hampton, etc ....all across Tidewater. • Our medical and health concerns are many and varied. Training is the key to successfully taking care of situations that do arise.
• I believe all of the above are important to the Hampton Roads Community. However, the over health and nutrition in Hampton Roads play a huge part in the community and future well-being.
• Cardiovascular diseases
• We would love to see expansion of your inpatient units and would like to see more partnership opportunities with you in the future. We serve a population that is in need of primary care, many without insurance or with Medicaid or GAP insurance where we don't have many providers will to accept these insurances for primary care.
• All of these items affect our community. I checked the items that I am familiar with from working with the students.
• Support groups

Community Services Needing Strengthening

Survey participants were asked, "Which community health services need strengthening?" Thirty-five choices were included in the survey; the number of choices each person could select was not restricted or ranked. The frequency of the services chosen are displayed below, followed by open-ended responses or additional comments submitted by the participants. Responses are ranked in order of the frequency identified; when counts equaled, the same rank is provided for those selections. Forty-five participants responded to this question.

Frequency Rank	2016 Community Services Needing Strengthening	% of Participants Selecting Item
1	Dental / Oral Health Care Services	58%
2	Mental Health - Behavioral Health Services	51%
	Services for Vulnerable Populations (e.g. uninsured / underinsured, migrant workers, homeless, etc.)	51%
4	Aging Services	49%
	Care Coordination and Transitions of Care	49%
	Chronic Disease Services (e.g. diabetes, high blood pressure, etc.)	49%
7	Transportation Services	44%
8	Health Care Insurance Coverage	42%
	Substance Abuse Services	42%
10	Long Term Care Services	38%
11	Cancer Services (e.g. screening, diagnosis, treatment, etc.)	33%
	Chronic Pain Management Services	33%
	Early Intervention Services for Children	33%
	Health Promotion and Prevention Services	33%
	Self Management Services (e.g. nutrition, exercise, taking medications)	33%
16	Primary Care Medical Services	31%
17	Food Safety Net (e.g. food bank, community gardens, school lunches, etc.)	29%
	Services for Caregivers	29%
19	Public Health Services	27%
20	Domestic Violence Services	24%
	Maternal, Infant, and Child Health Services	24%
22	Social Services	20%
	Veterans Services	20%
24	Hospice Services	18%
	Intellectual / Developmental Disabilities Services	18%
26	Environmental Health Services	16%
	Family Planning Services	16%

	Home Health Services	16%
	Pharmacy Services	16%
	School Health Services	16%
31	Specialty Medical Care Services (e.g. cardiologists, oncologists, etc.)	11%
32	Physical Rehabilitation	9%
	Public Safety Services	9%
	Workplace Health and Safety Services	9%
35	Hospital Services (e.g. inpatient, outpatient, emergency care, etc.)	7%

Dental / Oral Health Care Services, followed by mental and behavioral health services and services for vulnerable populations were the most frequently identified services by community stakeholders that need to be strengthened.

Seven participants chose to provide additional comments to the question, “Which community health services need strengthening?” These responses are provided below. Note responses are unedited except in the interest of confidentiality (example: participant phone number redacted).

Additional Comments
• Palliative Care - Resources and Education
• need more Primary care providers, especially West of Suffolk • improve transportation which currently is limited in area • outpatient psychiatry since there are none from Suffolk to Emporia (90 miles) • increased pain management and substance abuse resources
• Access to DME & Medical Supplies for uninsured and under-insured persons. Nutritional supplements are very expensive but most insurance will not cover cost unless only source of nutrition. Adult diapers are not covered by most private insurance, are very expensive but are needed for the health and comfort of individuals. Over 100 are on a waiting list for CPAPs at Sentara ACC and the sleep center will no longer perform sleep studies on patients that don't have coverage, funds or access to CPAP machines. Access Partnership has gathered about 40 donated CPAPs and provided to ACC who has them cleaned and ready for use for individuals in need. • Dental and oral services are most often excluded from coverage and there is a need to address reimbursement under medical benefits when oral health needs are adversely affecting medical health. Dental insurance is geared toward preventive care and most often has limits of $1,000 to $1,500 per year (under-insured). Access to dentures and partials is an issue that affects nutritional status and overall health but there are rare insurance programs that cover this. • Specialty care is difficult to obtain for the un/under insured. Most safety net providers focus on primary care and when a specialist is required, an "advocate" is needed to navigate. Specialty providers are being asked to see pro-bono cases by several different clinics, health centers, hospitals (specialists are required to take call and accept uninsured for privileges)
• Supportive Housing for persons with significant behavioral health issues to support their overall well-being including their management of chronic disease and preventing medical conditions. "Housing is healthcare"
• Chronic disease management for HBP, diabetes, respiratory illnesses.
• comprehensive health care that includes oral health - to reduce ED visits for dental issues; to improve diabetes outcomes, contribute to a reduction in preterm birth

- Again, I am only addressing issues that my students have dealt with in our community. I know, as someone who works in this area and lives between Franklin and Suffolk that we do not have enough medical doctors. A great deal of the area is using Nurse Practioners and it would be nice to actually see a medical doctor. Our family's doctor moved out of the practice and they have a NP in place. My only dealing with her, she did not even shake my hand or introduce herself and kept her back to me the whole time, typing on the computer. Our family is now seeking a new doctor, however, the convenience of the location to my work is important.

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

Survey participants were asked two related free response questions: “Are there particular populations within the community who are vulnerable or at risk for health problems or having difficulties obtaining health services?” and, “Are there particular neighborhoods or geographic regions within the community where the resident population may be vulnerable or at risk for health problems or having difficulties obtaining health services?” Summary results for each question are provided below, listed in order of relative frequency noted by stakeholder participants, followed by tables listing the detailed, unedited responses to each question. Thirty-four participants responded to the first question, while 32 participants responded to the second question.

Vulnerable/At-Risk Populations	Vulnerable/At-Risk Geographic Regions
• Low income • Uninsured/ underinsured • Elderly • Individuals with mental health issues • Unemployed/underemployed • Children	• Rural areas • Low income regions • Suffolk, including rural areas, downtown, East Suffolk, South Suffolk, Boston, and Saratoga • Norfolk • Portsmouth • Franklin, Isle of Wight, and Southampton Counties • Chesapeake, rural areas

Low income, uninsured/underinsured, and elderly populations were most frequently identified by community stakeholders as being vulnerable or at risk for health problems or having difficulties obtaining health services. Rural areas were commonly identified as vulnerable or at risk geographic regions.

“Are there particular populations within the community who are vulnerable or at risk for health problems or having difficulties obtaining health services?” Detailed Responses (unedited except for confidentiality reasons)
• Substance abusers; mentally ill
• low health literacy populations , uninsured , indigent and obese populations, increased aging population
• uninsured
• Seniors and Children • Working Poor
• single parents and the poor
• The uninsured or underinsured population.
• Those who are uninsured and fell into the gap - due to the state's decision not to expand Medicaid.
• Elderly with limited family support.
• Extremely low-income (under 100% poverty), unemployed, veterans, mentally and physically disabled, children and elderly populations are recognized vulnerable populations with many nonprofits and federal, state and local governments are working to address their needs. However, the working poor (over 100% and under

300% poverty) are over-income for most assistance, yet cannot afford health insurance premiums (without high deductibles & copays), and don't have funds to pay for preventive and therapeutic services.
• Uninsured/Underinsured, Unemployed/Underemployed, • Non-English speaking
• Persons experiencing homeless • Persons with serious mental illness - primary care physicians who are comfortable with medically treating persons with SMI
• Low income and those without proper access to transportation.
• Low income individuals with limited to no access to primary health care.
• low income, low education residents
• Inadequately insured individuals
• Of course the poor are without health services as they have no insurance.
• Low Income/elderly.
• Those without health insurance; very venerable population
• The one parent families are at risk with lack of transportation and proper insurance
• Homeless, uninsured
• Yes - underinsured, public housing, individuals living in food deserts
• Adults without health insurance
• Individuals with Disabilities for Dental Services • Veterans • Low income Seniors • All need Oral Healthcare Services
• Uninsured and those with mental illnesses
• Chronically mentally ill and substance abusing groups
• lower income families
• Those below the poverty level
• Older African American women in lower income communities
• uninsured, under-insured, low-income
• Yes. At risk for health problems are low income community members, as well as the elderly.
• Pediatric population; they only have one place to go, and it is not in your facilities.
• We only have one ortho doctor in the neighborhood and the office is crowded, with an allotted 15 minute visit with the doctor. The doctor knows we do not have choices and tends to be arrogant and demeaning. You can hear the conversations with the nurses and there is always discussion regarding these feelings, as well as myself.
• Unemployed, Aliens (non-natural born citizens), impoverished
• The people most vulnerable are those with some or no health insurance that still cannot afford the copays or the 20% payments. These individuals still not afford healthcare. People are making daily choices to seek treatment or not based on how much money is in the bank. The price of health care (on the bills) is astouding and illogical. The money reimbursed by insurance is the same. Healthcare costs and reimbursements do not make sense to the public (nothing adds up) and even to healthcare providers.

"Are there particular neighborhoods or geographic regions within the community where the resident population may be vulnerable or at risk for health problems or having difficulties obtaining health services?" Detailed Responses (unedited except for confidentiality reasons)
• Low income areas
• Portsmouth, Norfolk , Suffolk Chesapeake, Rural communities
• rural areas, inner city - downtown populations
• South Norfolk - not enough primary care
• Calvert Square, Tidewater Park, Southside, Suffolk, Portsmouth
• economic depressed areas
• Downtown Suffolk area and rural communities.
• Downtown/East Suffolk • outlying rural areas
• Average working class communities and those with young families. Child care averages $150 to $200 week and 2bdr apartments average $1,000/month. Add utilities, car payments, gas, etc. and there is nothing left to go to the dentist or see a doctor for preventive care. They delay until their need is acute and could have been prevented.
• There are pockets throughout the area
• Ocean View, Berkley
• Yes, Southampton county and other outlying areas.
• The most rural areas
• usual underserved areas
• Portsmouth
• Inner city Norfolk has food deserts as well as one of the highest violence rates in the state of Va.
• Those in poverty
• Yes, our rural areas are at risk
• Ocean View
• Norfolk, Newport News, Portsmouth, Hampton
• Lower income neighborhoods in all of the cities and rural communities in Suffolk, Chesapeake and Virginia Beach
• Downtown Suffolk area in 23434, Franklin/Southampton Co. Isle of Wight Co.
• I have witnessed all areas of Southampton Roads Virginia in need of oral healthcare services
• Norfolk, Portsmouth
• rural areas of Suffolk and Virginia Beach
• Neighborhoods with residents below the poverty level
• Yes. Older neighborhoods and communities such as South Suffolk, Saratoga, Boston/Williamstown, Public Housing communities
• see above. zip code is very much a predictor of health
• All of the neighborhoods that you serve.
• Not that I am aware of at this time.
• not sure of the demographic needs

- Area of northhampton blvd is home to many sex offenders and a new building for the working homeless. The areas up Diamond Springs Rd are poor and dangerous. More services to this area of Virginia Beach would be great.

Health Assets in the Community

Survey participants were asked to think of health assets as people, institutions, programs, built resources (e.g. walking trails), or natural resources (e.g. beaches) that promote a culture of health. Then they were asked two related free response questions, "In your view, what are the most important health assets within the community?" followed by, "Are there any health assets that the community needs but is lacking?" Summary results for each question are provided below, listed in order of relative frequency noted by stakeholder participants, followed by tables listing the detailed, unedited responses to each question. Thirty-three participants responded to the first question, while 27 participants responded to the second question.

Most Important Health Assets Existing in Community	Needed Health Assets Currently Lacking in the Community
• Built resources, including community parks, recreation areas, walking and bike trails, gyms, and YMCA • Safety net providers/clinics and area hospitals • Health Department • Obici Healthcare Foundation • Farmer's Markets/Fresh produce access • Emphasis on people, institutions, collaborations, and specific community programs	• Built resources to improve the walkability and bikeability of communities • Assets focused on improving medical, preventive, and dental care to the indigent and uninsured/underinsured population • Mental health and substance abuse services/facilities • Assets related to wellness and obesity prevention (increased access to healthy foods/venues, education, safe parks) • Improved public transportation • Diabetes health promotion • Cancer treatment

Built resources, safety net providers and area hospitals, along with the Health Department and the Obici Healthcare Foundation were frequently noted by stakeholders as the most important health assets that exist in the community. More built resources to improve the walkability and bikeability of communities, assets focused on improving medical, preventive, and dental care to the indigent and uninsured/underinsured population were among the most frequently mentioned health assets that are needed in the community.

"In your view, what are the most important health assets within the community?" **Detailed Responses** (unedited except for confidentiality reasons)
• Safety net clinics and community health centers
• Community parks , walking trails , bike lanes ,athletic and fitness centers. Strong health systems .
• obici healthcare foundation, built resources - recreation, walking trails, medical resources
• Obici hospital • Obici health Care Foudation
• Chesapeake Regional Medical Center, Chesapeake Public Health Department, YMCA, Chesapeake Care Free Clinic
• Natural resources, built resources, evms
• Bike trail in Norfolk

• really having an effective program to address a healthy life style is not happening in the Suffolk area
• People - philanthropic groups
• people and institutions
• New city gyms, Ymca, new trail • Smithfield Windsor Castle is a great park • Obici foundation Healthy Suffolk program
• People helping people, for example the faith-based community. Churches have food pantries, are providing more affordable child care, dinners for seniors, shelter (NEST), emergency financial assistance for people in need. They are the best example of community assistance.
• Institutions that can be relied on to serve as models of health. Built resources that can be easily utilized in the metropolis that is Hampton Roads.
• Parks, parks & rec classes
• Healthy People Healthy Suffolk, Western Tidewater CSB, Western Tidewater Free Clinic, Main Street Physicians (Southeastern Virginia Health Systems), Obici Healthcare Foundation.
• Service providers
• Sentara, EVMS, VDH, local outdoors
• Open spaces, parks and opportunities to be physically active in a safe environment, we need to change the culture to active living
• If the people have health insurance
• Recreation Centers; bike/walking trails; boardwalk/beach.
• access to food
• Our community leaders are informed and support health initiatives. We also rely on the VDH office in the county.
• Walking paths, healthy-food access/ farmer's markets, Hands-only CPR training
• Expanded public and specialized transportation; greater access to evidence based wellness instruction, stronger links between health collaboratives and civic groups
• Safety net providers who have dental • ODU School of Dental Hygiene has 32 chair clinic • ODU School of Dental Hygiene 35 dental hygiene students who impact community • Sentara Grant -Dental Voucher Program for those who are uninsured and underserved • Mission of Mercy Dental Access Event 1x per year - over 600 individuals were turned away • Homeless Connect Norfolk Access Event
• Having a network of individuals willing to work on population health issues, such as the Healthy Chesapeake Coalition
• Health and Wellness facilities/YMCAs, Sentara network, public parks/recreation centers, walking friendly neighborhoods,
• Free clinic
• parks, playgrounds, sidewalks and trails
• YMCA, walking trail at PDCCC, grant opportunities to ensure the community has educational resources. Events at PDCCC WFC.
• Yes
• access to a safe, healthy environment for people to exercise in and will be free to the public.
• Sentara is well located throughout the community. Safety on walking trails outside the state parks is an issue. The Public Health Department is underfunded - and they serve a large population in Hampton Roads. Assisting with funding of Public Health Initiatives (partnering) would be an important asset.

“Are there any health assets that the community needs but is lacking?” **Detailed Responses** (unedited except for confidentiality reasons)
• Substance abuse and mental health treatment, especially for those who cannot afford it or are uninsured
• More healthy eating and fresh food offerings • Senior offerings • Obesity prevention and education
• more built resources
• Mental health facilities, good public transit, bicycle trails
• Safe Parks for children, walking trails
• cancer treatment and primary care
• more dental providers for the uninsured
• additional , local walking areas
• Coordination, connections to resources, teaching (without lecturing) how to access and better manage health resources. Many "classes" and workshops are offered but there is a limited amount of time to participate in the offerings. Access Partnership identified that if information is sent to some of the local churches, they reach out to their congregations. There is also a "trust" within the faith-based communities that may be lacking in other areas, especially in minority communities.
• Bike trails, walking trails, better public transportation that would encourage more biking and walking rather than just pulling in a parking space.
• Assertive outreach and access primary care and medications for no fee for indigent
• some sort of collaborative community analytic and needs identification capability
• Bike and pedestrian paths
• Health insurance
• access to care with no insurance
• education
• Sidewalks
• Mental Health facilities and providers
• A call-center for our area for those who do not have access to healthcare services especially dental. Most go to the emergency room - expensive and inadequate care.
• Free clinics
• availability of primary care willing to serve the under or un-insured
• Access to fruits and vegetables in some urban and rural areas
• connectivity and transportation
• collaboration among existing orgs and agencies will increase collective impact and improve outcomes.
• More on diabetes and health promotion
• Safe walking areas at night
• n/a

Additional Ideas and Suggestions

As an optional open-ended question, additional ideas or suggestions for improving community health were asked to be shared. Fifteen participants provided comments. The detailed responses are provided below. Note responses are unedited except in the interest of confidentiality (example: participant phone number redacted).

Additional Ideas and Suggestions
• The state government needs to expand Medicaid.
• Transportation for health care is a major concern for many. • More long term care facilities and resources for increasing senior populations . Better collaboration within the health community.
• Work collaboratively with CRMC and public health department
• Community needs to do a better job of promotion healthy options in life style choices.
• Central point of entry into care or services for those who are uninsured, homeless, etc. One place where a person can enter for all services. Medical, social and behavorial.
• Push for greater colon cancer screening, advanced directives, dietary education
• Bon Secours created Parish Nursing, now known as faith-based nursing and worked with health advocates and professionals within the churches. This was very successful but doesn't seem as active. There may be an opportunity to revisit faith community nursing in Hampton Roads since there are churches in every community. http://www.churchhealthcenter.org/fcnhome
• Greater access to healthcare for mourning most vulnerable citizens without the ability to pay.
• Partnerships need to be more abundant and we need to look at our local sourcing of food. People need access to locally grown fresh produce, we need a large farmers market that is affordable to all.
• Rental bikes for downtown areas. More drive share areas for traveling to and from work.
• The school division is presently trying to contact the local dental providers in hopes that they will form a local coalition to support the youth in the schools and community.
• Call Center for South Hampton Roads Area of VA. • Safety Net Providers help but weak on human resources and grants funding for dental • More visability for ODU School of Dental Hygiene Care Clinic where we can see many underserved individuals. • Transportation issues
• Workforce development
• I write as the ED of a statewide organization, so my lens is not as specific to Hampton-Roads as i would like to best fill out this survey - but i see your community making great strides to collaborate and work collectively to improve health outcomes. my niche is oral health integration and the importance of including oral health as part of comprehensive health care (improving diabetes outcomes, early childhood health, and reducing pain and use of the ED for avoidable conditions.
• Education

Community Focus Group Session Findings

Community Focus Groups were carried out for greater insight from diverse stakeholders. Focus groups were often drawn from existing hospital and community groups or sought from other populations in the community, including representatives of underserved communities and consumers of services.

Five focus group sessions were held in August and September of 2016. The number of participants ranged from 6 to 35. When possible, representatives from the health department and other local hospitals were invited to attend the sessions.

1. Sentara Obici Junior Volunteers
2. Sentara Obici Patient, Family and Advisory Council
3. SNF Collaborative
4. Healthy Suffolk Partnership
5. Educators from Elephant's Fork Elementary School

A series of questions were asked during each focus group. A brief summary of the key findings for each topic is presented below.

Topic	Key Findings
What are the most serious health problems in our community?	The focus groups had many responses in common which included: obesity/poor nutrition, mental health/substance abuse, cancer, diabetes, dental health, Alzheimer's/dementia, heart disease, and access to care, elder care, health literacy Additional feedback that was not as widely shared across focus groups included: rise of ADHD, childhood allergies, and autism, lung disease, STDs, and teen pregnancy
Who/what groups of individuals are most impacted by these problems?	Common responses included: elderly, families, under- and un-insured, children, those in rural areas without access to care, indigent and working poor, Additional feedback included: healthcare system (SNF, hospitals, providers, insurance), caregivers, disparities among certain ethnic groups, disabled
What keeps people from being healthy? In other words, what are the barriers to achieving good health?	Common responses included: lack of knowledge of resources available, access to resources (health food, transportation, education and wellness programs), apathy/willingness to utilize available resources, poverty, high cost of healthcare/health insurance, education, lack of time it takes to be healthy Additional feedback included: peer pressure (related to teens and alcohol and drug abuse, teen pregnancy, etc.), cultural barriers, complexity of care, lack of focus on prevention, poor coordination of care, compartmentalization of health care, abuse and neglect, denial, early conversations about disease processes/prognosis

What is being done in our community to improve health and reduce the barriers/what resources exist in the community?	Each group had slightly different feedback in regards to their awareness of the available resources. Responses from the groups included: school counselors, churches/youth ministry, Western Tidewater Free Clinic, Healthy Suffolk Partnership, evidence based healthcare through the Agency on Aging, Obici Healthcare Foundation, efforts to increase those who are insured through the ACA, YMCA, classes and programs offered at Sentara Obici, Parks and Rec program, food bank, health fairs
What more can be done to improve health, particularly for those individuals and groups most in need?	The focus groups had excellent feedback on different methods that they felt would improve health in the community: leverage social media, improve coordination of resources, invest in community programs using evidence based care, assess food deserts, tie into existing community events, partner with churches (bulletins, programs, parish nurses, etc), develop email groups or blogs, work with the school system with goal of prevention, develop mobile resources to get care to groups in need

V. APPENDIX

An evaluation of the progress toward the implementation strategies is included in the following pages.

Sentara Community Health Needs Assessment Implementation Strategy

2016 Quarterly Progress Report

Hospital: Obici ASC

Quarter (please indicate): X First Quarter X Second Quarter X Third Quarter X Year End

In support of Sentara's 2014 goal to "demonstrate community benefit in the communities we serve", Sentara will measure the progress toward the community health needs assessment implementation strategies selected by each hospital on a quarterly basis.

To complete this quarterly progress report, the health problems and implementation strategies can be pasted into this document from the hospital's existing Three Year Implementation Strategy document. The quarterly progress should be identified in the third column below.

The quarterly report should include only key actions taken during the quarter; the report does not need to include all activities. Where possible the actions should be quantified, with outcomes measurements if available.

Reports should be emailed to Deb Anderson at dkanders@sentara.com within 15 days of the close of each quarter.

Health Problem	Three Year Implementation Strategies	Progress
All		
Problem #1 Orthopaedics	Provide seminars in conjunction with SOH, to education the public on Orthopaedic care and treatment options provided at SOH and Obici ASC.	On February 20th we implement our first monthly knee pain talk to educate the public about treatment options at SOH and Obici ASC. Flyers are posted at the YMCA; there is a registration and information page at http://smoc-pt.com/public-events/

Health Problem	Three Year Implementation Strategies	Progress
		Knee talks continued through the third quarter of the year. At that point, participation had decreased and the office took over doing the talks themselves.
Problem #2 Health Care Coverage	Participate with the Western Tidewater Free Clinic at a community level with a specific focus on serving the indigent or needy patients needing surgery.	One of owners of the Obici ASC, an eye physician, donates ½ a day a week to the clinic and provides care at the Surgery Center for those patients needing surgery. We continued to provide charity care throughout the year for all services lines when requested.
Problem #3 Heart Disease	Participate in the American Heart Association Heart Chase Function. Work with community health and prevention to provide screenings and self-learning programs.	Multiple staff members participated in the May 2014 Heart Chase. Patients with undiagnosed heart disease that was found upon the preop screening or intraoperatively were given information to contact a cardiologist for preventative care.
Problem #4 All	Participate with the hospital's National Night Out Program to education community regarding our existing services. Contacted Colgate products in summer of 2016 to try and secure free toothbrushes to hand out to our pediatric population. Researched methods to secure car seats for our pediatric population as many of them come without one for their procedures.	In the third quarter we participate with the National Night Out. The staff gave tours to participants of the center and discuss what services we have available. Have been unable to secure toothbrushes currently to hand out. Am working on writing a grant to secure car seats.

Health Problem	Three Year Implementation Strategies	Progress
Problem #5 Nutrition	Contacted WIC in 2016 in order to gather handouts related to proper nutrition and dental care for our pediatric population.	Received information and handed out to patients family members.