Sentara Leigh Ambulatory Surgery Center
Community Health Needs Assessment
2016

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Sentara Leigh Ambulatory Surgery Center

2016 Community Health Needs Assessment

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I. INTRODUCTION

Sentara Leigh Ambulatory Surgery Center has conducted a community health needs assessment in collaboration with Sentara Leigh 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:

- Adult Obesity
- Hypertension
- Tobacco Use

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.

Sentara Leigh 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!

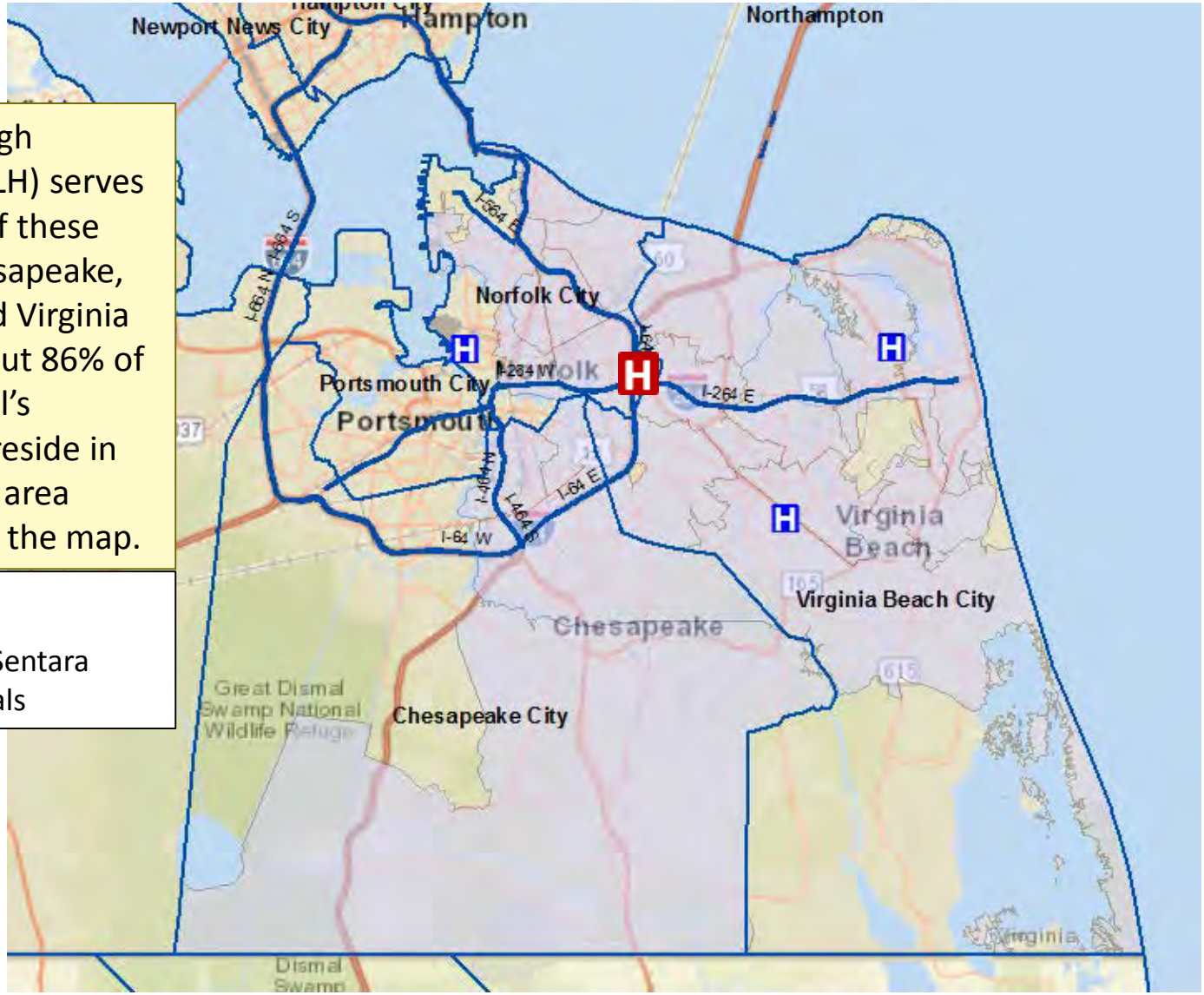
Sentara Leigh Hospital (SLH) 2016 Community Health Needs Assessment

Community Description

Community Description

Sentara Leigh Hospital Service Area

Sentara Leigh Hospital (SLH) serves residents of these cities: Chesapeake, Norfolk and Virginia Beach. About 86% of the hospital's inpatients reside in the service area depicted in the map.



SLH

Other Sentara Hospitals

Area-wide Key Demographic Characteristics

DEMOGRAPHIC CHARACTERISTICS	Selected Area	Virginia	USA
2010 Total Population	759,153	8,001,038	308,745,538
2016 Total Population	789,549	8,428,339	322,431,073
2021 Total Population	820,336	8,801,874	334,341,965
%Change 2016 - 2021	3.9%	4.4%	3.7%
Median Household Income	$62,264	$ 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	154,451	19.6%	159,410	19.4%	18.5%	19.0%
15-17	29,841	3.8%	31,351	3.8%	3.8%	4.0%
18-24	79,605	10.1%	75,026	9.1%	10.0%	9.8%
25-34	125,537	15.9%	121,087	14.8%	13.6%	13.3%
35-54	205,927	26.1%	211,894	25.8%	26.8%	26.0%
55-64	95,961	12.2%	102,853	12.5%	12.9%	12.8%
65+	98,227	12.4%	118,715	14.5%	14.4%	15.1%
Total	789,549	100.0%	820,336	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	11,580	2.2%	4.8%	5.8%
Some High School	31,402	6.0%	7.0%	7.8%
High School Degree	130,754	24.9%	25.0%	27.9%
Some College/Assoc. Degree	192,713	36.7%	27.3%	29.2%
Bachelor's Degree or Greater	159,203	30.3%	35.8%	29.4%
Total	525,652	100.0%	100.0%	100.0%

- **The area's 2016 total population is 789,549 with projected growth of 3.9% over the next five years.**
  - This service area is projected to grow slower than the Virginia rate (4.4%), but slightly faster than the U.S. rate (3.7%).
- **The median household income ($62,264)** is slightly lower than the state, but higher than the U.S. median income.
- **Population by age group:**
  - 15.9% of this population is age 25-34, which is a greater percent compared to Virginia (13.6%) and the U.S. (13.3%).
  - The percent of population for the age cohorts of 55-64 and 65+ is lower (24.6%) than that of Virginia (27.3%) and the U.S (27.9%).
- **8.2% of the population age 25+ has only some high school education or less,** which is a smaller percent as compared to 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 0.5%,** which is significantly lower than the state (1.3%) and the U.S. (1.5%).
- **17.1% of the population has a household income below $25,000.**
  - This is comparable to the state (17.9%), however lower than the U.S. (22.7%).
  - 200% of the current Federal Poverty Level for a family of four is $48,600.
- **25.8% of the population is Black Non-Hispanic and 57.1% 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	386,942	402,724	4.1%	4.5%	3.8%
Total Female Population	402,607	417,612	3.7%	4.4%	3.6%
Females, Child Bearing Age (15-44)	165,438	166,310	0.5%	1.3%	1.5%

HOUSEHOLD INCOME DISTRIBUTION				
	Income Distribution			
2016 Household Incom	HH Count	% of Total	Virginia % of Total	USA % of Total
<$15K	27,530	9.1%	9.6%	12.3%
$15-25K	24,231	8.0%	8.3%	10.4%
$25-50K	69,914	23.1%	20.8%	23.4%
$50-75K	62,834	20.8%	17.6%	17.6%
$75-100K	40,552	13.4%	12.6%	12.0%
Over $100K	77,525	25.6%	31.1%	24.3%
Total	**302,586**	**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	450,661	57.1%	62.5%	61.3%
Black Non-Hispanic	203,724	25.8%	18.9%	12.3%
Hispanic	60,619	7.7%	9.2%	17.8%
Asian & Pacific Is. Non-Hispanic	42,931	5.4%	6.3%	5.4%
All Others	31,614	4.0%	3.1%	3.1%
Total	**789,549**	**100.0%**	**100.0%**	**100.0%**

Source: Truven/Market Expert

Key Demographic Data by ZIP Code

- The Greenbrier area is expected to **increase in total population** (8%) by 2021 as compared to the service area (3.9%), Virginia (4.4%) and the US (3.7%).
- **The number of residents age 65+** in Fentress and Princess Anne are projected to increase at a higher percentage as comparable to Virginia.
- **The Pediatric population** overall is expected to grow faster than the state and the U.S. The Fentress area specifically is expected to decline by -8.2% whereas the Wards Corner Pediatric population is expected to grow by 9.8%.
- **The female population of childbearing age (15-44)** in Fentress is projected to grow by 5.8%, whereas Willoughby is projected to decline by -3.1% over the next 5 years.

ZIP Codes	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
23320	Greenbrier	57,367	8.0%	12.4%	27.8%	23.3%	7.7%	41.2%	2.2%
23322	Fentress	64,555	5.1%	11.8%	33.0%	21.6%	-8.2%	36.7%	5.8%
23324	South Norfolk	23,489	3.3%	12.8%	14.6%	28.2%	4.1%	40.9%	1.5%
23325	Indian River	18,307	2.7%	14.5%	15.4%	24.4%	2.6%	40.4%	1.1%
23451	Oceanfront	43,896	4.5%	16.7%	18.1%	20.1%	5.6%	39.1%	1.6%
23452	Little Neck	60,012	1.7%	13.5%	13.2%	23.2%	2.0%	40.9%	-0.9%
23453	Green Run	37,558	3.8%	7.7%	31.6%	27.3%	0.9%	44.5%	-1.1%
23454	Hilltop / Oceana	62,589	3.9%	12.3%	19.6%	23.1%	1.7%	40.7%	0.8%
23455	Bayside	51,566	3.8%	15.5%	15.1%	20.7%	5.5%	39.6%	0.9%
23456	Princess Anne	55,680	5.9%	10.9%	34.5%	23.9%	-0.9%	38.6%	2.2%
23462	Witchduck	62,361	4.0%	11.4%	15.0%	24.3%	6.8%	44.8%	-0.5%
23463	CBN	402	9.5%	4.7%	26.3%	24.9%	19.0%	57.4%	2.4%
23464	Kempsville	74,588	3.4%	13.4%	20.9%	22.6%	2.0%	40.2%	0.0%
23502	JANAF	20,959	2.9%	15.2%	16.8%	22.1%	8.2%	39.4%	0.8%
23503	Willoughby	31,067	2.3%	9.9%	24.3%	22.8%	9.5%	44.0%	-3.1%
23504	Huntersville	24,382	2.9%	9.8%	18.7%	26.8%	3.6%	47.1%	0.0%
23505	Wards Corner	30,142	3.1%	10.2%	16.9%	25.0%	9.8%	45.5%	-0.7%
23509	Lafayette	13,071	2.3%	14.5%	17.5%	22.1%	5.6%	38.4%	-1.0%
23513	Norview	29,340	2.2%	10.7%	21.8%	24.8%	6.9%	42.2%	-1.5%
23518	East Ocean View	28,218	1.9%	13.6%	15.4%	22.9%	8.4%	40.1%	-2.0%
	Total	789,549	3.9%	12.4%	20.9%	23.3%	3.5%	41.1%	0.5%
	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%

Source: Truven/Market Expert

ZIP Code Demographics, Cont.

ZIP Codes	Area	Race and Ethnicity			Income and Education	
		2016 % of Pop.: Black	2016 % of Pop.: Asian / Pac Isl	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
23320	Greenbrier	29.5%	5.9%	6.7%	12.6%	5.2%
23322	Fentress	10.3%	2.9%	4.0%	7.8%	6.0%
23324	South Norfolk	55.9%	1.1%	8.9%	31.1%	20.5%
23325	Indian River	41.7%	2.1%	5.7%	21.1%	14.5%
23451	Oceanfront	9.3%	2.1%	7.6%	17.6%	4.0%
23452	Little Neck	18.5%	4.8%	9.4%	13.2%	7.0%
23453	Green Run	27.1%	11.3%	10.7%	11.6%	5.1%
23454	Hilltop / Oceana	11.2%	3.8%	7.9%	15.0%	4.4%
23455	Bayside	14.7%	5.6%	7.7%	12.8%	5.1%
23456	Princess Anne	15.1%	9.1%	7.0%	6.2%	4.0%
23462	Witchduck	29.8%	6.0%	9.3%	15.2%	7.7%
23463	CBN	26.6%	5.2%	7.2%	23.2%	6.8%
23464	Kempsville	22.8%	11.0%	7.2%	12.5%	5.9%
23502	JANAF	49.4%	4.4%	7.1%	23.7%	14.9%
23503	Willoughby	20.8%	3.0%	8.9%	22.4%	11.5%
23504	Huntersville	84.3%	0.7%	3.5%	48.9%	22.4%
23505	Wards Corner	31.5%	4.4%	9.4%	28.9%	9.3%
23509	Lafayette	47.4%	1.7%	6.6%	25.7%	17.8%
23513	Norview	55.0%	5.4%	8.7%	29.4%	18.0%
23518	East Ocean View	22.1%	5.4%	9.4%	24.6%	14.2%
	Total	25.8%	5.4%	7.7%	17.1%	8.2%
	Virginia	18.9%	6.3%	9.2%	17.9%	11.8%
	United States	12.3%	5.4%	17.8%	22.7%	13.6%

- This service area has a higher percent of the population of **African American, Non-Hispanic** than Virginia and the U.S. Within the service area, Huntersville (84.3%) has the highest percent of that population.
- Green Run and Kempsville have the highest portion of **the Asian, Non-Hispanic population** of (11.3% and 11.0% respectively) for the service area, Virginia and the US.
- Green Run is leading the area with the largest segment of **Hispanic residents** (10.7%).
- Huntersville has the largest percentage of **households with lower income levels below $25,000** (48.9%) and the largest segment of the **population age 25 and older with no High School diploma** (22.4%) within the service area.

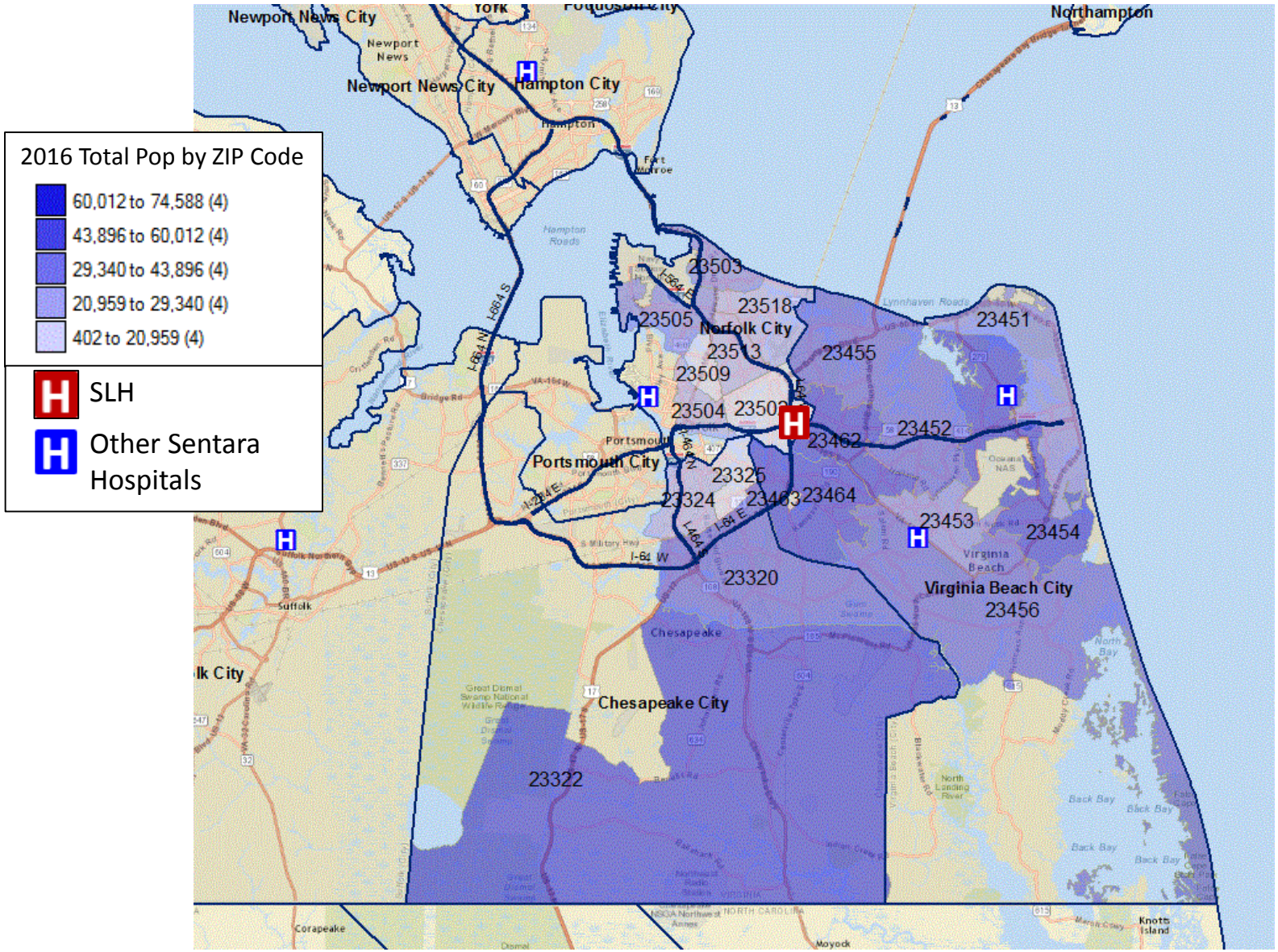
Source: Truven/Market Expert

Key Demographic Data by ZIP

City/County	Zip Code	ZIP Common Names	Total Population 2016	Total Population 2021	% Change 2016-2021	2016 Pop Density / Sq Mile	% of Service Area Pop	% White NonHisp	% Black NonHisp	% Asian NonHisp	% Hispanic	% Other NonHisp
Chesapeake	**23320**	Greenbrier	57,367	61,952	8.0%	1696	7.3%	53.8%	29.5%	5.9%	6.7%	4.1%
Chesapeake	**23322**	Fentress	64,555	67,821	5.1%	343	8.2%	79.9%	10.3%	2.9%	4.0%	2.8%
Chesapeake	**23324**	South Norfolk	23,489	24,259	3.3%	3137	3.0%	31.3%	55.9%	1.1%	8.9%	2.8%
Chesapeake	**23325**	Indian River	18,307	18,804	2.7%	4303	2.3%	47.1%	41.7%	2.1%	5.7%	3.4%
Virginia Beach	**23451**	Oceanfront	43,896	45,890	4.5%	2092	5.6%	77.8%	9.3%	2.1%	7.6%	3.3%
Virginia Beach	**23452**	Little Neck	60,012	61,054	1.7%	3577	7.6%	62.9%	18.5%	4.8%	9.4%	4.5%
Virginia Beach	**23453**	Green Run	37,558	38,999	3.8%	3942	4.8%	45.7%	27.1%	11.3%	10.7%	5.2%
Virginia Beach	**23454**	Hilltop / Oceana	62,589	65,023	3.9%	2547	7.9%	73.1%	11.2%	3.8%	7.9%	4.1%
Virginia Beach	**23455**	Bayside	51,566	53,533	3.8%	2619	6.5%	68.3%	14.7%	5.6%	7.7%	3.7%
Virginia Beach	**23456**	Princess Anne	55,680	58,970	5.9%	867	7.1%	64.7%	15.1%	9.1%	7.0%	4.2%
Virginia Beach	**23462**	Witchduck	62,361	64,850	4.0%	5477	7.9%	50.1%	29.8%	6.0%	9.3%	4.8%
Virginia Beach	**23463**	CBN	402	440	9.5%	1336	0.1%	55.2%	26.6%	5.2%	7.2%	5.7%
Virginia Beach	**23464**	Kempsville	74,588	77,095	3.4%	4354	9.4%	54.5%	22.8%	11.0%	7.2%	4.4%
Norfolk	**23502**	JANAF	20,959	21,576	2.9%	2301	2.7%	35.6%	49.4%	4.4%	7.1%	3.4%
Norfolk	**23503**	Willoughby	31,067	31,783	2.3%	6354	3.9%	62.8%	20.8%	3.0%	8.9%	4.4%
Norfolk	**23504**	Huntersville	24,382	25,094	2.9%	5397	3.1%	8.7%	84.3%	0.7%	3.5%	2.8%
Norfolk	**23505**	Wards Corner	30,142	31,077	3.1%	3774	3.8%	50.7%	31.5%	4.4%	9.4%	4.1%
Norfolk	**23509**	Lafayette	13,071	13,373	2.3%	4551	1.7%	40.8%	47.4%	1.7%	6.6%	3.5%
Norfolk	**23513**	Norview	29,340	29,976	2.2%	5581	3.7%	26.6%	55.0%	5.4%	8.7%	4.4%
Norfolk	**23518**	East Ocean View	28,218	28,767	1.9%	3211	3.6%	58.9%	22.1%	5.4%	9.4%	4.2%
Total SLH Service Area			789,549	820,336	3.9%	1711		57.1%	25.8%	5.4%	7.7%	4.0%
Virginia			8,428,339	8,801,874	4.4%	213.8		62.5%	18.9%	6.3%	9.2%	3.1%
USA			322,431,073	334,341,965	3.7%	91.4		61.3%	12.3%	5.4%	17.8%	3.1%

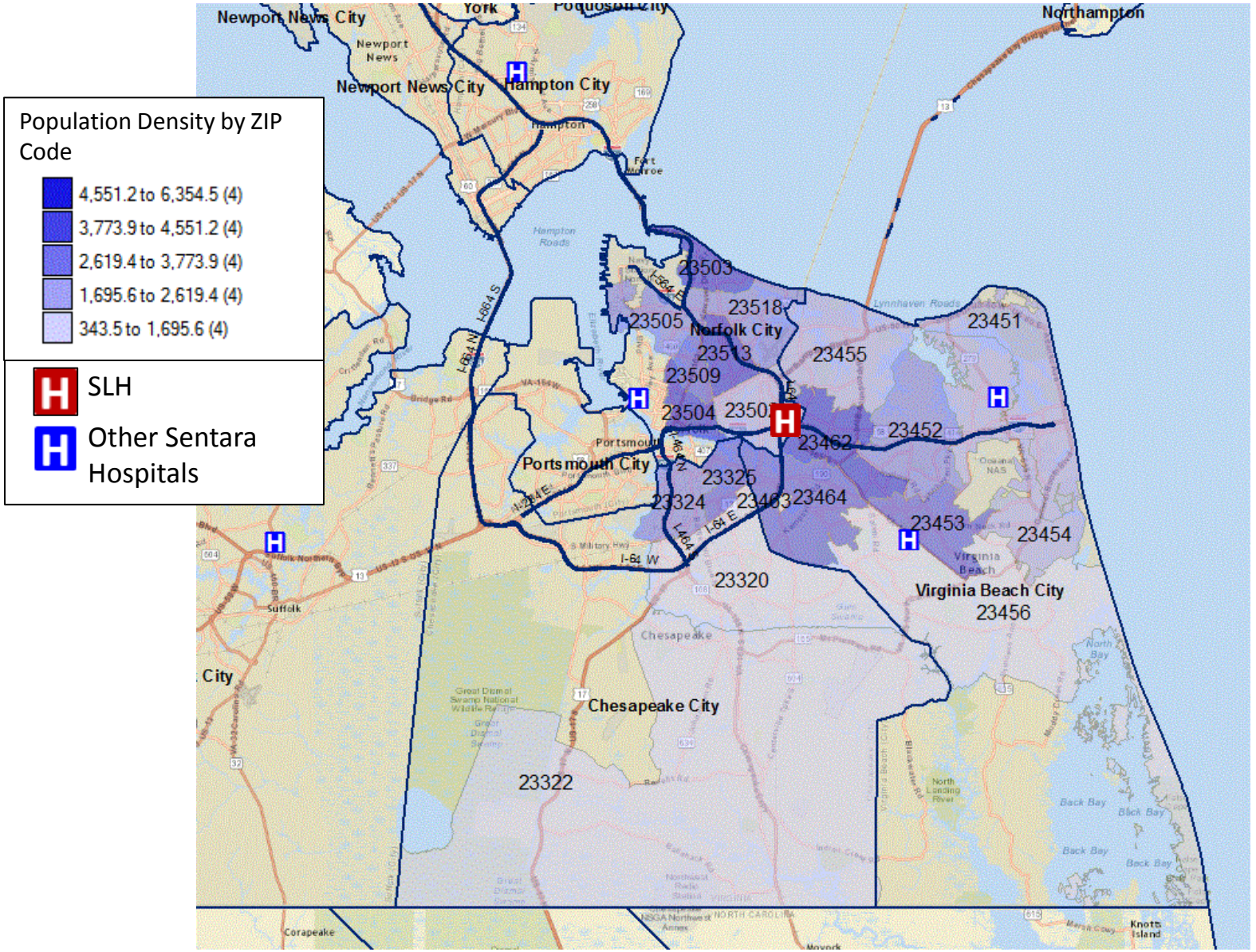
Source: Truven/Market Expert

2016 Total Population by ZIP Code



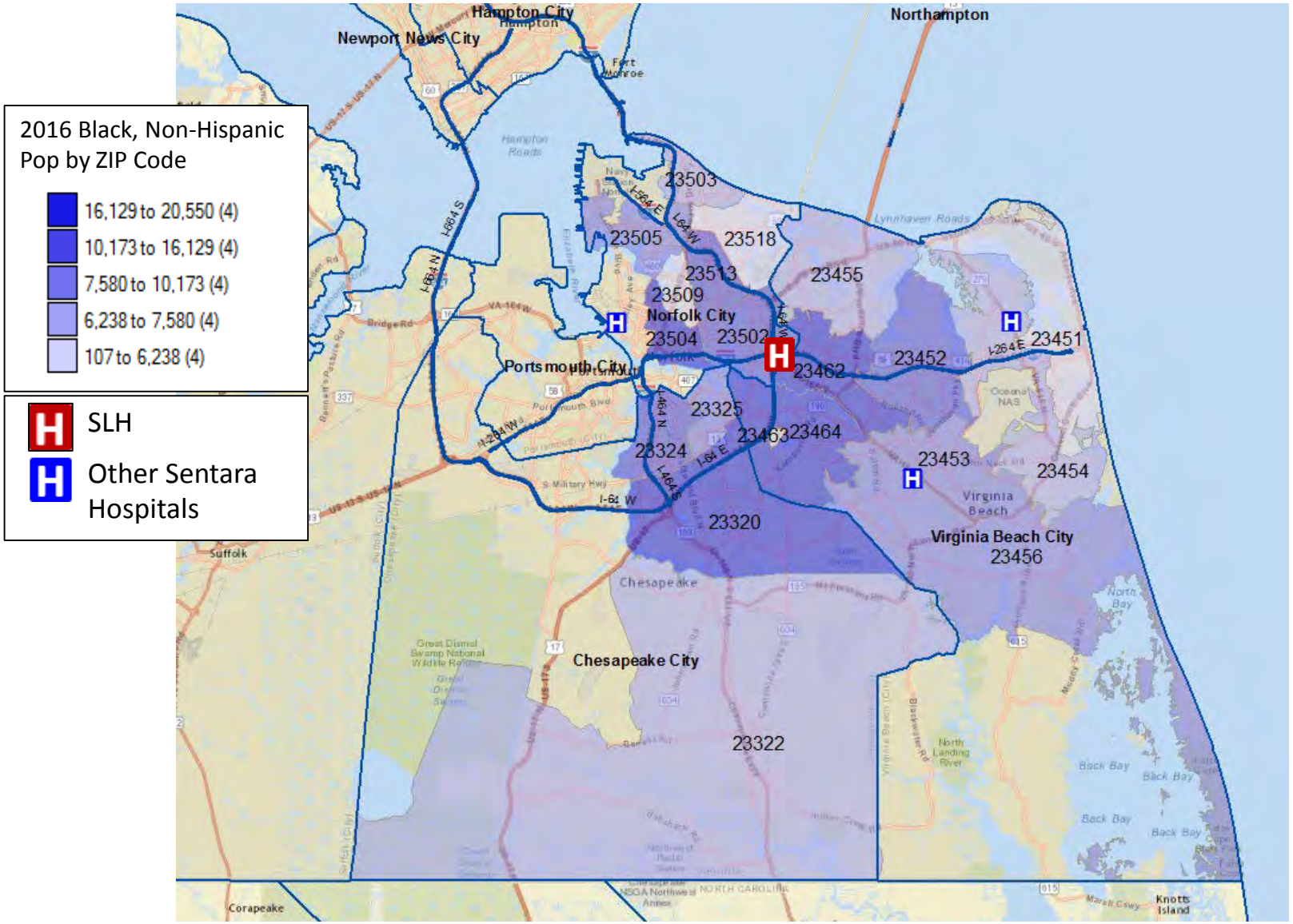
Source: Truven/Market Expert

2016 Population Density by ZIP Code



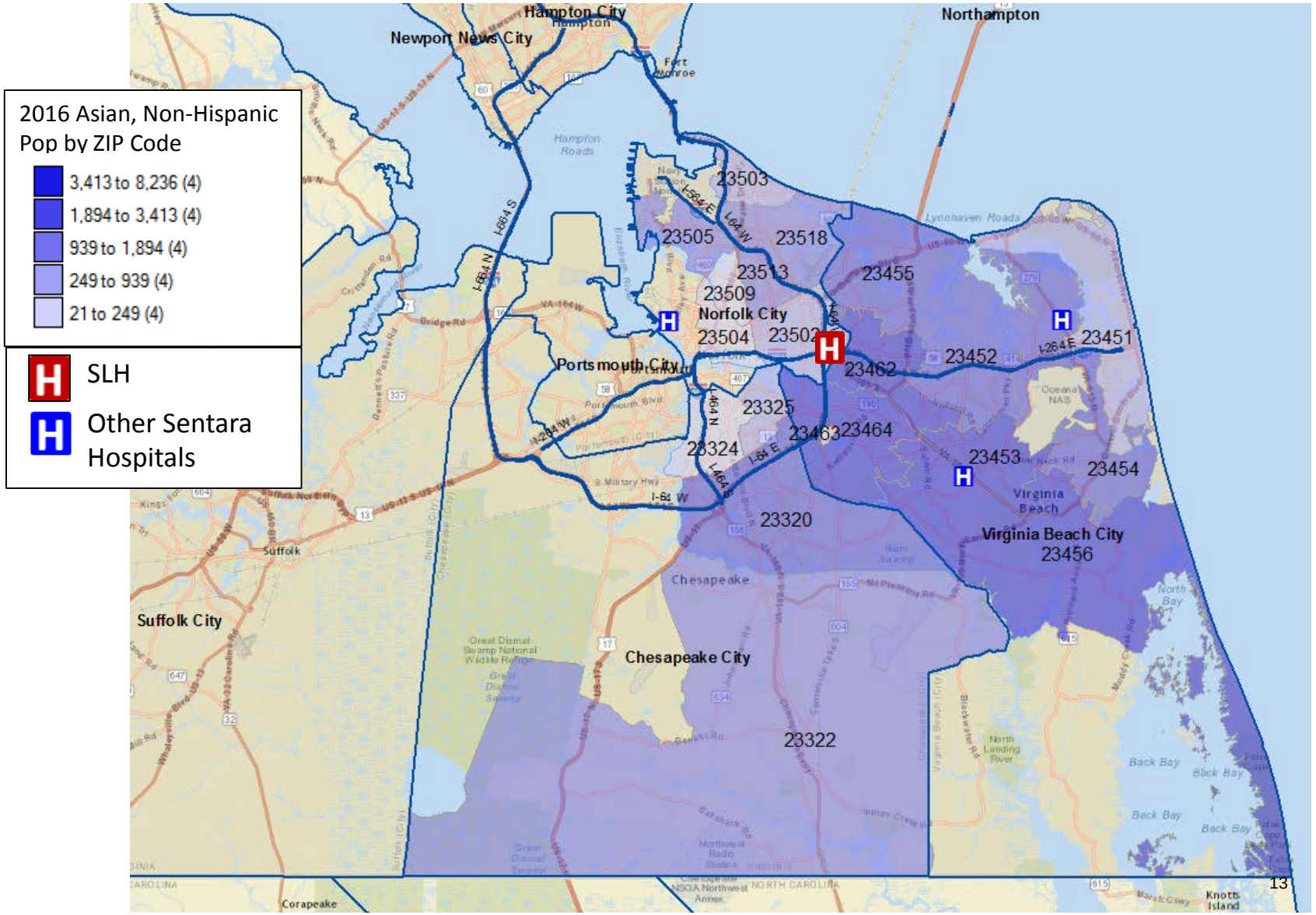
Source: Truven/Market Expert

2016 Black, Non-Hispanic Population by ZIP Code



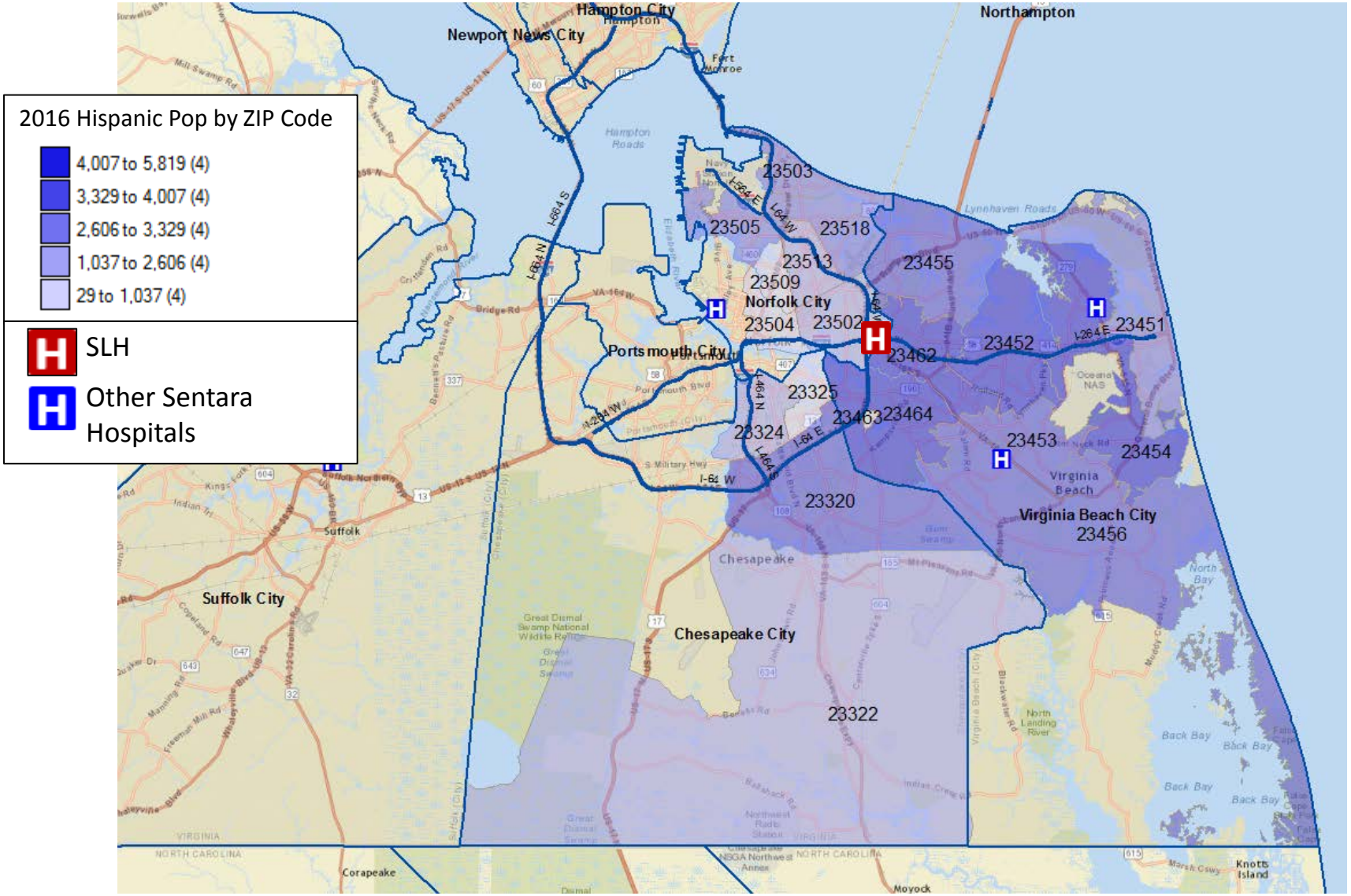
Source: Truven/Market Expert

2016 Asian, Non-Hispanic Population by ZIP Code



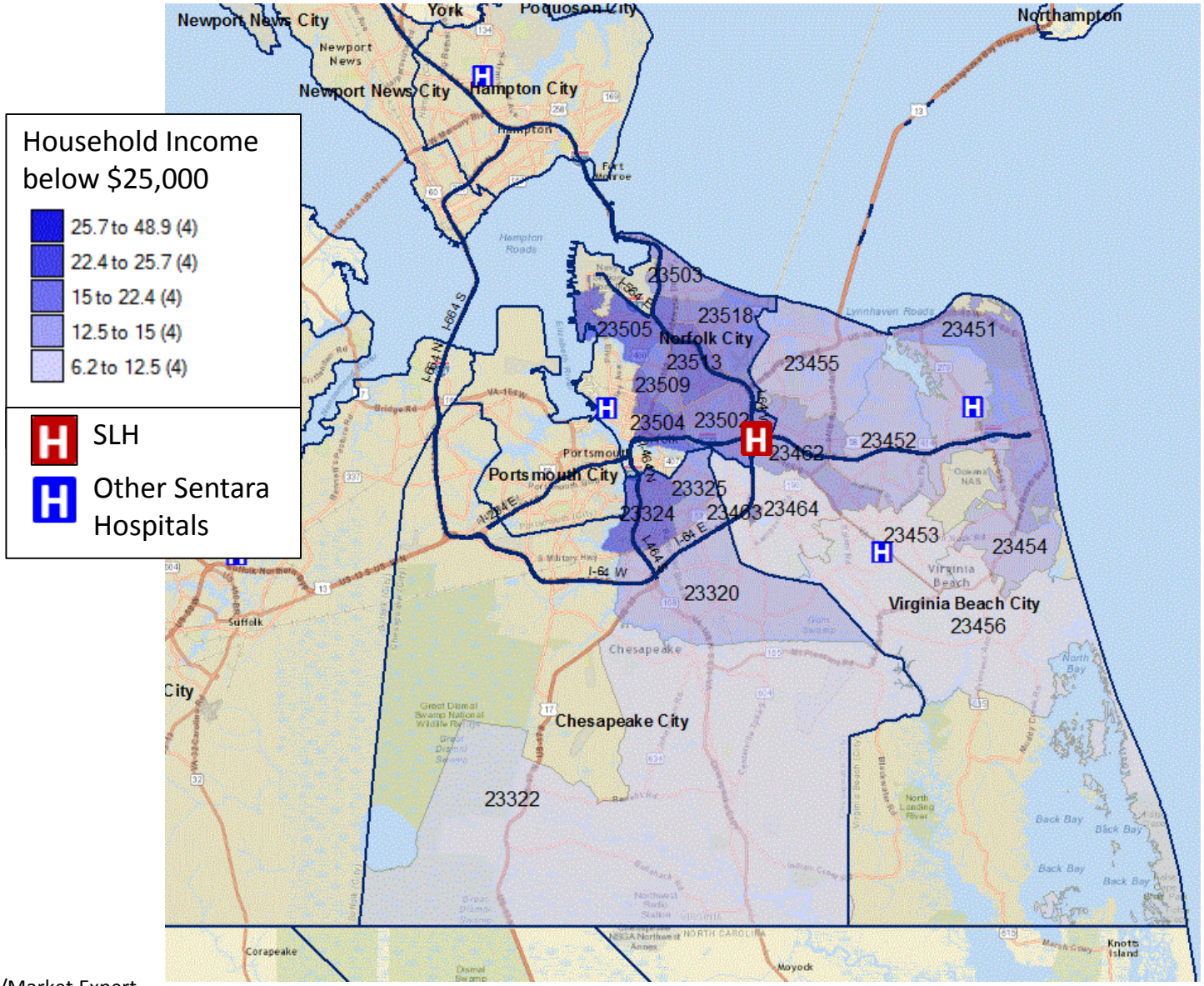
Source: Truven/Market Expert

2016 Hispanic Population by ZIP Code



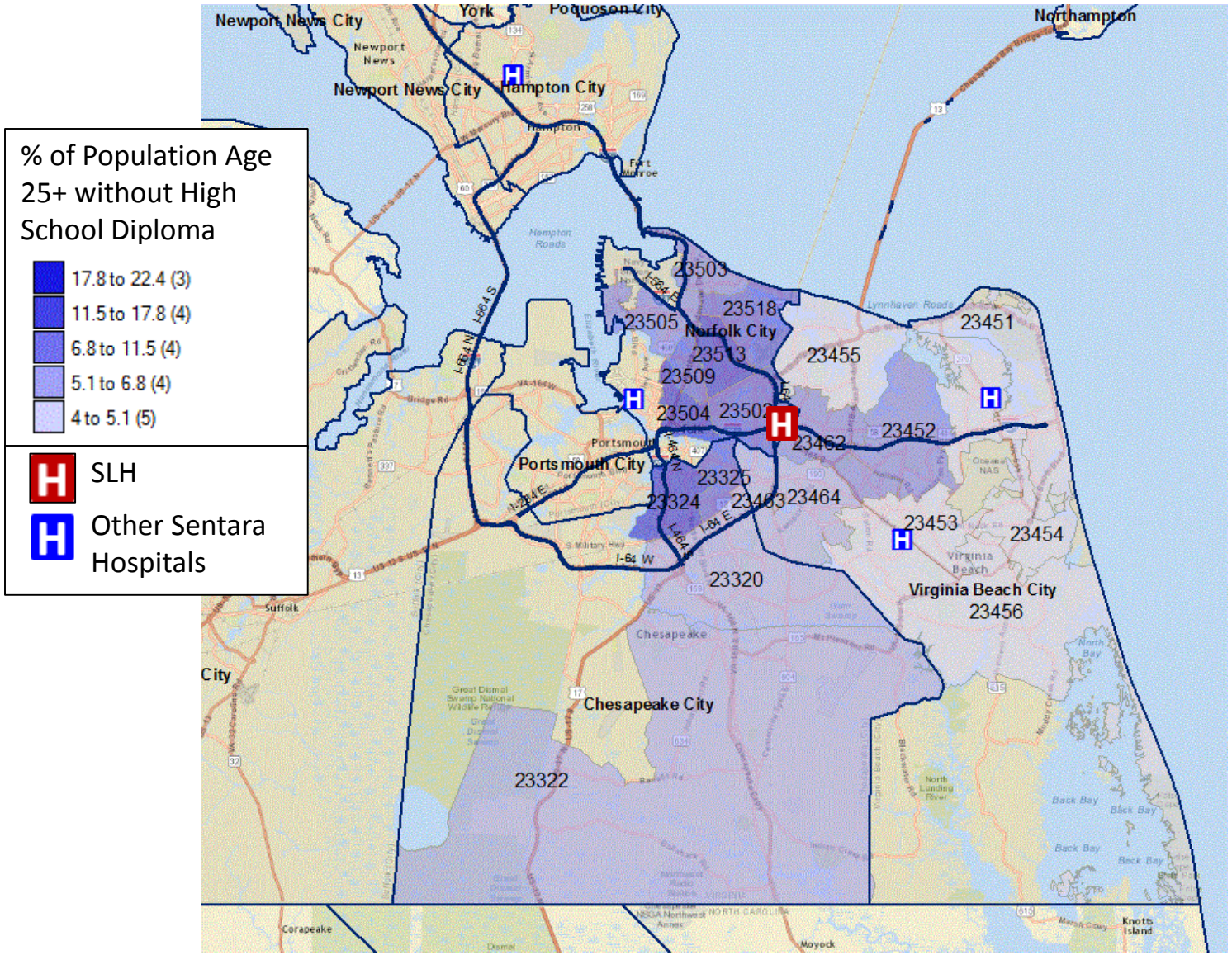
Source: Truven/Market Expert

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 SLH Service Area

ZIP code	City	ZIP Code Name
23320	Chesapeake	Greenbrier
23322	Chesapeake	Fentress
23324	Chesapeake	South Norfolk
23325	Chesapeake	Indian River
23451	Virginia Beach	Oceanfront
23452	Virginia Beach	Little Neck
23453	Virginia Beach	Green Run
23454	Virginia Beach	Hilltop / Oceana
23455	Virginia Beach	Bayside
23456	Virginia Beach	Princess Anne
23462	Virginia Beach	Witchduck
23463	Virginia Beach	CBN
23464	Virginia Beach	Kempsville
23502	Norfolk	JANAF
23503	Norfolk	Willoughby
23504	Norfolk	Huntersville
23505	Norfolk	Wards Corner
23509	Norfolk	Lafayette
23513	Norfolk	Norview
23518	Norfolk	East Ocean View

Health Status Indicators Report

Prepared for Sentara Leigh Hospital

By Community Health Solutions

June 2016

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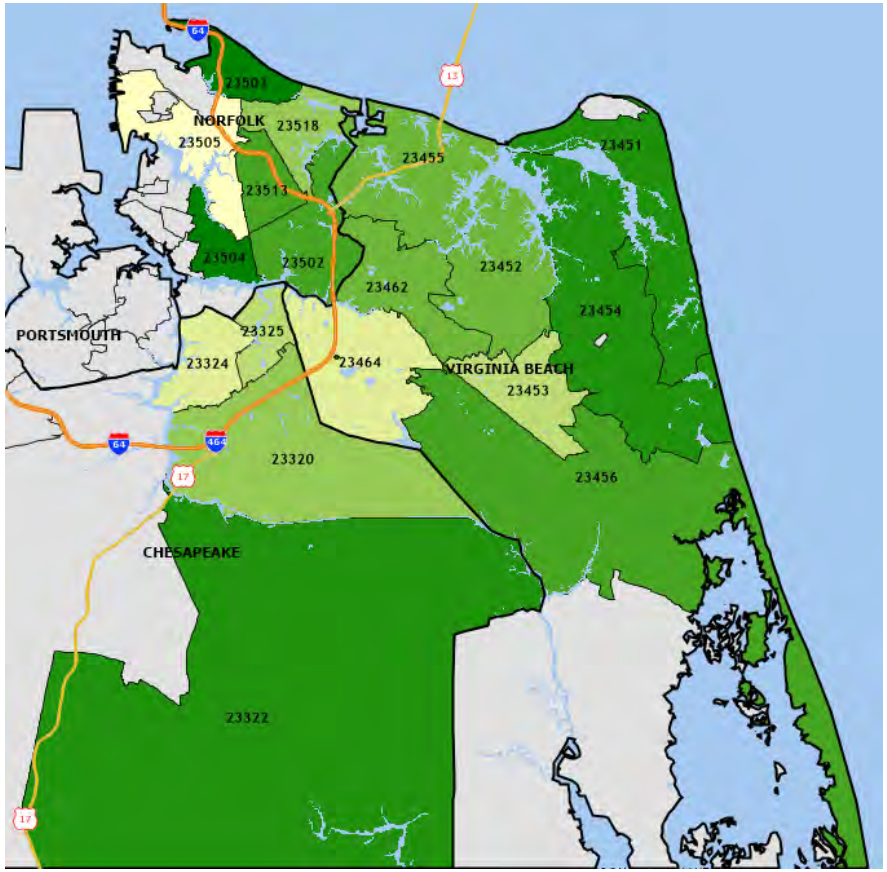
Introduction

This document presents a health status indicators report for Sentara Leigh Hospital. The report was commissioned by Sentara Healthcare and Sentara Leigh Hospital, and produced by Community Health Solutions. The study presents health status indicators for the Sentara Leigh Hospital service area of 20 zip codes, most of which fall within the cities of Chesapeake, Norfolk and Virginia Beach.

Study Region



The study draws upon multiple data sources to present seven 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

The profiles are presented in order 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 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).
- This analysis was conducted at the zip code level. There are indicators (e.g. pregnancy indicators) and rate-calculation models (age adjustment) that are not available at this geographic level.

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 5,631 deaths in the study region.
- The leading causes of death in the study region were Malignant Neoplasms (cancer), Heart Disease, Cerebrovascular Disease (stroke), Chronic Lower Respiratory Disease, and Unintentional Injury.
- The death rates for the study region were higher (worse) than the state rates for Unintentional Injury, Diabetes, Nephritis and Nephrosis.

Mortality Trend – All Deaths (2011-2013)

- **Trend by Cause:** As shown in *Exhibit 1B,* from 2011 to 2013, study region rates decreased for all deaths combined, and for most causes of death. The study region rates increased for deaths due to Unintentional Injury and Nephritis. Unlike, the study region, the statewide rates increased for all deaths combined, and Septicemia; and remained stable for Malignant Neoplasms, Heart Disease, Chronic Lower Respiratory Disease, Unintentional Injury and Influenza and Pneumonia.
- **Trend by Race/Ethnicity:** As shown in *Exhibit 1C,* from 2011 to 2013 there was an increase in the number of total deaths in the study region for all racial/ethnic groups, with the exception of the Asian population. Unlike the study region, statewide deaths for the Asian population increased, and deaths for the White population remained relatively stable.
- **Trend by Sex:** As shown in *Exhibit 1D,* from 2011 to 2013 there was a 3% increase in the number of total deaths in the study region for the female population, and an 10% increase for the male population. The study region trend was consistent with the statewide trend.

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 preventable deaths. While Unintentional Injury was the fifth leading cause of all deaths, it was the third leading cause of premature deaths.
- **Trend by Cause:** As shown in *Exhibit 1E*:
    - From 2011 to 2013 there was an increase in the number of premature deaths in the study region overall, and for six of the top 10 causes of premature death. Specifically, study region premature deaths increased for Malignant Neoplasms, Heart Disease, Unintentional Injury, Cerebrovascular Diseases, Chronic Liver Disease, and Nephritis and Nephrosis.
    - Unlike the study region, the statewide counts remained relatively stable for Malignant Neoplasms, Chronic Lower Respiratory Diseases, Suicide, and Diabetes.
    - Unlike the study region, the statewide counts increased for Septicemia.

- **Trend by Race/Ethnicity:** As shown in *Exhibit 1F,* from 2011 to 2013, there was an increase in the number of premature deaths in the study region for the White and Hispanic Ethnicity populations, and a decline in the Asian, and Black/African American population. Unlike the study region, the statewide rates increased for Asian and Black/African American populations, and remained relatively stable for the White population.
- **Trend by Sex:** As shown in *Exhibit 1G*, from 2011 to 2013 there was a 3% increase in the number of total deaths in the study region for the female population, and an 11% increase for the male population. The study region trend was consistent with the statewide trend.

Exhibit 1A. Mortality Snapshot (2013)

Indicator	Virginia	Study Region
Counts		
Deaths by All Causes	62,309	5,631
Counts-Leading 14 Causes of Death		
Malignant Neoplasms	14,348	1,297
Heart Disease	13,543	1,204
Cerebrovascular Diseases	3,278	289
Chronic Lower Respiratory Diseases	3,168	274
Unintentional Injury	2,794	271
Diabetes Mellitus	1,618	156
Nephritis and Nephrosis	1,547	155
Septicemia	1,464	133
Alzheimer's Disease	1,634	132
Influenza and Pneumonia	1,430	101
Suicide	1,047	90
Chronic Liver Disease	836	73
Primary Hypertension and Renal Disease	629	48
Parkinson’s Disease	549	42
Crude Death Rates per 100,000 Population		
Deaths by All Causes	755.5	721.3
Malignant Neoplasms	174.0	166.1
Heart Disease	164.2	154.2
Cerebrovascular Diseases	39.7	37.0
Chronic Lower Respiratory Diseases	38.4	35.1
Unintentional Injury	33.9	34.7
Diabetes Mellitus	19.6	20.0
Nephritis and Nephrosis	18.8	19.9
Septicemia	17.8	17.0
Alzheimer's Disease	19.8	16.9
Influenza and Pneumonia	17.3	12.9
Suicide	12.7	11.5
Chronic Liver Disease	10.1	9.4
Primary Hypertension and Renal Disease	7.6	6.1
Parkinson’s Disease	6.7	5.4

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)	5,290	5,378	5,631	3%	6%
Malignant Neoplasms (Cancer)	1,197	1,286	1,297	1%	8%
Heart Disease	1,116	1,179	1,204	3%	8%
Chronic Lower Respiratory Disease	283	284	274	2%	-3%
Cerebrovascular Disease (Stroke)	258	235	289	-1%	12%
Unintentional Injury	239	228	271	2%	13%
Alzheimer's Disease	181	145	132	-9%	-27%
Diabetes Mellitus	157	134	156	-1%	-1%
Nephritis and Nephrosis	138	131	155	9%	12%
Septicemia	132	104	133	7%	1%
Influenza and Pneumonia	107	83	101	2%	-6%
Crude Death Rates per 100,000 Population					
Total Deaths (All Causes)	749.0	700.2	721.3	2%	-4%
Malignant Neoplasms (Cancer)	169.5	167.4	166.1	-1%	-2%
Heart Disease	158.0	153.5	154.2	1%	-2%
Chronic Lower Respiratory Disease	40.1	37.0	35.1	1%	-12%
Cerebrovascular Disease (Stroke)	36.5	30.6	37.0	-3%	1%
Unintentional Injury	33.8	29.7	34.7	1%	3%
Alzheimer's Disease	25.6	18.9	16.9	-10%	-34%
Diabetes Mellitus	22.2	17.4	20.0	-2%	-10%
Nephritis and Nephrosis	19.5	17.1	19.9	7%	2%
Septicemia	18.7	13.5	17.0	5%	-9%
Influenza and Pneumonia	15.1	10.8	12.9	0%	-15%

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

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Asian	147	132	136	15%	-7%
Black/African American	1,399	1,413	1,435	4%	3%
White	3,718	3,819	3,995	1%	7%
Hispanic Ethnicity	77	82	95	8%	23%
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.					
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	2,759	2,751	2,848	3%	3%
Male	2,531	2,627	2,783	4%	10%
Notes: 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 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)	2,475	2,537	2,657	4%	7%
Malignant Neoplasms	695	747	777	0%	12%
Heart Disease	440	485	486	6%	10%
Unintentional Injury	171	148	197	-2%	15%
Chronic Lower Respiratory Diseases	111	108	98	1%	-12%
Cerebrovascular Diseases	101	92	112	5%	11%
Suicide	99	87	84	0%	-15%
Diabetes	79	64	73	-1%	-8%
Chronic Liver Disease	60	70	67	21%	12%
Septicemia	59	51	57	11%	-3%
Nephritis and Nephrosis	50	55	65	16%	30%
Notes: 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 1F. Premature Mortality Trend by Race/Ethnicity (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Asian	79	72	74	3%	-6%
Black/African American	876	878	862	3%	-2%
White	1,501	1,579	1,674	2%	12%
Hispanic Ethnicity	48	53	52	0%	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.					
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	1,096	1,063	1,128	3%	3%
Male	1,379	1,474	1,529	4%	11%
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.					
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 11,037 live births in the study region. Among the live births were 907 low weight births, 1,384 late prenatal care births, 4,032 non-marital births, and 563 live births to teens.
- The study region had a higher birth rate than Virginia in 2013. The study region also had higher rates (worse) than Virginia for teen live birth rates overall, and for the teens age 18-19.

Maternal and Infant Health Trend (2011-2013)

- **Select Birth Indicators**. As shown in *Exhibit 2B*, from 2011 to 2013 within the study region, there was a decrease in the rate of total live births, low weight births, and non-marital births. Unlike the study region, the statewide rates remained stable for low weight and non-marital births.
- **Teenage Births Trend by Age Group**. As shown in *Exhibit 2C*, from 2011 to 2013 within the study region, there was a substantial decrease in the overall number of teen births. The study region trend was consistent with the statewide trend.
- **Teenage Births Trend Race/Ethnicity**. As shown in *Exhibit 2D,* from 2011 to 2013 there was a decrease in the number of teen births among all race/ethnic groups. The study region trend was consistent with the statewide trend.

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

Indicator	Virginia	Study Region
Counts		
Total Live Births	101,977	11,037
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	8,178	907
Late Prenatal Care (No Prenatal Care in First 13 Weeks)	13,435	1,384
Non-Marital Births	35,289	4,032
Live Births to Teens Age 10-19	5,316	563
Live Births to Teens Age 18-19	4,073	438
Live Births to Teens Age 15-17	1,208	120
Live Births to Teens Age <15	35	5
Rates		
Live Birth Rate per 1,000 Population	12.3	14.1
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%	13%
Non-Marital Births pct. of Total Live Births	35%	37%
Teenage (age 10-19) Live Birth Rate per 1,000 Teenage Female Population (age 10-19)	10.3	11.4
Teenage (age 18-19) Live Birth Rate per 1,000 Teenage Female Population (age 18-19)	36.4	48.1
Teenage (age 15-17) Live Birth Rate per 1,000 Teenage Female Population (age 15-17)	8.0	7.6
Teenage (age <15) Live Birth Rate per 1,000 Teenage Female Population (age <15)	0.1	0.2
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 Indicators Trend (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total Live Births	11,223	11,348	11,037	-1%	-2%
Low Weight Births	956	1,065	907	0%	-5%
Non Marital Births	4,243	4,322	4,032	-3%	-5%
Rates	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total Live Births (per 1,000 population)	15.9	14.8	14.1	-3%	-11%
Low Weight (as a percent of Total Live Births)	9%	9%	8%	0%	-4%
Non Marital Births (as a percent of Total Live Births)	38%	38%	37%	-1%	-3%
Note: Rates and/or percent change are not calculated where n<30.					
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		725	706	563	-19%	-22%
Age	18-19	544	531	438	-15%	-19%
	15-17	178	165	120	-29%	-33%
	<15	3	10	5	-39%	--
Note: Rates and/or percent change are not calculated where n<30. 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.						

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	389	384	307	-23%	-21%
	White	284	260	186	-26%	-35%
Ethnicity	Hispanic Ethnicity	50	46	48	-5%	-4%
Note: Rates and/or percent change are not calculated where n<30. 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 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 8,271 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+), Diabetes, Bacterial Pneumonia, and Urinary Tract Infection.
- The crude PQI discharges rates for the study region were higher (worse) than the Virginia rates for the PQIs overall, and for six of the ten PQI diagnoses. Specifically, the study region rates were higher than the statewide rates for Congestive Heart Failure, Diabetes, Bacterial Pneumonia, Dehydration, Hypertension, and Asthma in Younger Adults (age 18-39).

Preventable Hospitalization Trend (2011-2013)

- **By Leading Diagnoses.** As shown in *Exhibit 3B,* from 2011 to 2013 the crude PQI discharge rates per 100,000 population declined for total PQIs, and for all specific diagnoses. The study region trend was consistent with the statewide trend for diagnoses except Diabetes and Bacterial Pneumonia, where the statewide rate remained stable or increased.
- **By Age Group**. As shown in *Exhibit 3C*, from 2011 to 2013 the rate of Total PQI discharges for the study region decreased 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 the rate of Total PQI discharges for the study region decreased for all racial/ethnic populations. The study region trend was consistent with the statewide trend.
- **By Payer.** As shown in *Exhibit 3E*, from 2011 to 2013 the study region counts for Total PQI discharges declined for the Medicaid and Private Insurance populations, and increased for the Medicare and Self-Pay/Uninsured populations. The study region trend was consistent with the statewide trend for the Medicare, Private Insurance and Self-Pay/Uninsured population. The study region trend was consistent with the statewide trend.

Exhibit 3A. Preventable Hospitalization Snapshot (2013)

Indicator	Virginia	Study Region
Counts		
Total PQI Discharges (see note)	76,860	8,271
Congestive Heart Failure	18,239	2,217
COPD or Asthma In Older Adults (age 40+)	16,026	1,689
Diabetes	11,099	1,183
Bacterial Pneumonia	11,867	1,171
Urinary Tract Infection	8,452	749
Dehydration	7,743	745
Hypertension	2,768	300
Perforated Appendix	1,189	112
Asthma in Younger Adults (age 18-39)	444	109
Angina	941	72
Crude Rates per 100,000 Population		
Total PQI Discharges (see note)	932.0	1,059.5
Congestive Heart Failure	194.3	284.0
COPD or Asthma In Older Adults (age 40+)	221.2	216.4
Diabetes	120.5	151.5
Bacterial Pneumonia	143.9	150.0
Urinary Tract Infection	102.5	95.9
Dehydration	93.9	95.4
Hypertension	33.6	38.4
Perforated Appendix	14.4	14.3
Asthma in Younger Adults (age 18-39)	5.4	14.0
Angina	11.4	9.2
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 Diagnosis (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All PQI Discharges	8,143	7,967	8,271	-6%	2%
Congestive Heart Failure	2,082	2,103	2,217	-8%	6%
Bacterial Pneumonia	1,167	1,195	1,171	-29%	0%
COPD or Asthma In Older Adults (age 40+)	1,688	1,564	1,689	-20%	0%
Diabetes	1,178	1,025	1,183	-2%	0%
Urinary Tract Infection	802	812	749	-22%	-7%
Crude Rates per 100,000 Population					
All PQI Discharges	1,152.9	1,037.3	1,059.5	-7%	-8%
Congestive Heart Failure	294.8	273.8	284.0	-9%	-4%
Bacterial Pneumonia	165.2	155.6	150.0	30%	-9%
COPD or Asthma In Older Adults (age 40+)	239.0	203.6	216.4	-21%	-9%
Diabetes	166.8	133.5	151.5	0%	-9%
Urinary Tract Infection	113.5	105.7	95.9	-23%	-15%

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

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI Discharges)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Age	Adults Age 18-29	382	347	360	-23%	-6%
	Adults Age 30-44	707	650	661	-21%	-7%
	Adults Age 45-64	2,551	2,428	2,548	-18%	0%
	Seniors Age 65+	4,503	4,542	4,702	-20%	4%
Crude Rates per 100,000 Population						
Age	Adults Age 18-29	282.5	45.2	239.9	-24%	-15%
	Adults Age 30-44	501.0	355.1	423.2	-21%	-16%
	Adults Age 45-64	1,393.8	1,688.1	1,254.9	-19%	-10%
	Seniors Age 65+	6,000.3	2,949.3	5,572.2	-23%	-7%

Note: -- Rates are not calculated where n<30. PQI Discharges with an unknown age were not included in the analysis. 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 3D. Preventable Hospitalization Trend by Race/Ethnicity (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI Discharges)					**Virginia**	**Study Region**
Race	Asian	172	149	126	-11%	-27%
	Black/African American	2,922	2,914	2,872	-16%	-2%
	White	4,701	4,550	4,657	-22%	-1%
Ethnicity	Hispanic Ethnicity	115	108	124	-30%	8%
Crude Rates per 100,000 Population						
Race	Asian	505.0	390.0	324.2	-24%	-36%
	Black/African American	1,522.4	1,391.2	1,366.6	-21%	-10%
	White	1,077.6	965.5	966.7	-19%	-10%
Ethnicity	Hispanic Ethnicity	240.6	221.1	248.8	-23%	3%

Note: -- Rates and/or percent change are not calculated where n<30. PQI Discharges with an Other/Unknown race were not included in the analysis. Hispanic is classification of ethnicity; therefore, Hispanic individuals are also included in the race categories. 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 3E. Preventable Hospitalization Trend by Payer (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI Discharges)					**Virginia**	**Study Region**
Payer	Medicare	5,163	5,051	5,267	2%	2%
	Medicaid	783	785	666	-6%	-15%
	Private	635	645	621	-12%	-2%
	Self-Pay/Uninsured	1,562	1,486	1,717	2%	10%
Crude Rates per 100,000 Population						
Payer	Medicare	--	--	--	--	--
	Medicaid	--	--	--	--	--
	Private	--	--	--	--	--
	Self-Pay/Uninsured	--	--	--	--	--

Note: -- Rates and/or percent change are not calculated where n<30. PQI Discharges with unknown payer were not included in the analysis.
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.

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 5,303 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, and Alcoholic Psychoses.
- The BH discharge rates for the study region were higher than the state rates for all BH diagnoses combined, and for most of the leading BH diagnoses. The study region BH discharge rate was higher than the statewide rate for Affective Psychoses, Schizophrenic Disorders, Alcoholic Psychoses, Drug Psychoses, Symptoms Involving Head or Neck, Altered Mental Status, and Drug Dependence.

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

- **By Leading Diagnoses.** As shown in *Exhibit 4B*, from 2011 to 2013 the study region rates remained stable for BH discharges overall, and for Affective Psychoses; increased for Alcoholic Disorders, and declined for Schizophrenic Disorders. Unlike the study region, the statewide rate increased for BH discharges overall, decreased for Affective Psychoses, and remained stable for Schizophrenic Disorders.
- **By Age Group**. As shown in *Exhibit 4C*, from 2011 to 2013 the study region rate for BH discharges declined for all age groups. Unlike the study region, the statewide rate increased for the population age 18-64.
- **By Sex.** As shown in *Exhibit 4D*, from 2011 to 2013 there was a 7% decline in the rate of BH discharges in the study region for the female population, and a 9% increase for the male population. The study region trend was consistent with the statewide trend.
- **By Race/Ethnicity.** As shown in *Exhibit 4E*, from 2011 to 2013 the study region rates for BH discharges declined for the Asian population, and increased for the Black/African American population, and remained stable for the White population. Unlike the study region, the statewide rate increased for the Asian and White populations, and remained stable for the Black/African American population.
- **By Payer.** As shown in *Exhibit 4F*, from 2011 to 2013 the study region counts of BH discharges in the study region increased for the Medicaid and Self-Pay/Uninsured populations, decreased for the Medicare population, and remained relatively stable for the Private Insurance population. Unlike the study region, the statewide rate increased for the Medicare payer population.

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

Indicator	Virginia	Study Region
Counts-BH Discharges		
Total BH Diagnoses	53,638	5,303
Counts-Leading 14 BH Diagnoses		
Affective Psychoses	22,078	2,316
Schizophrenic Disorders	8,064	1,001
Alcoholic Psychoses	4,033	506
Drug Psychoses	2,102	268
Alcohol Dependence Syndrome	2,388	159
Symptoms Involving Head or Neck	883	112
Other Nonorganic Psychoses	1,951	111
Adjustment Reaction	2,031	108
Altered Mental Status	976	108
Depressive Disorder, Not Elsewhere Classified	2,608	104
Drug Dependence	810	81
Neurotic Disorders	982	56
Other Organic Psychotic Conditions-Chronic	795	33
Non Dependent Abuse of Drugs	575	19
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 4A. Behavioral Health Hospitalization Snapshot-Age 18+ (2013)- Continued

Indicator	Virginia	Study Region
Crude Rates Per 100,000 Population		
All Diagnoses	650.4	679.3
Affective Psychoses	267.7	296.7
Schizophrenic Disorders	97.8	128.2
Alcoholic Psychoses	48.9	64.8
Drug Psychoses	25.5	34.3
Alcohol Dependence Syndrome	29.0	20.4
Symptoms Involving Head or Neck	10.7	14.3
Other Nonorganic Psychoses	23.7	14.2
Adjustment Reaction	24.6	13.8
Altered Mental Status	11.8	13.8
Depressive Disorder, Not Elsewhere Classified	31.6	13.3
Drug Dependence	9.8	10.4
Neurotic Disorders	11.9	7.2
Other Organic Psychotic Conditions-Chronic	9.6	4.2
Non Dependent Abuse of Drugs	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)	
	2011	2012	2013	Virginia	Study Region
Counts					
Total BH Discharges (All Diagnoses)	5,151	5,466	5,303	3%	3%
Affective Psychoses	2,219	2,214	2,316	-1%	4%
Alcoholic Psychoses	333	499	506	23%	52%
Schizophrenic Disorders	1,026	1,149	1,001	1%	-2%
Crude Rates per 100,000 Population					
Total BH Discharges (All Diagnoses)	679.1	711.7	679.3	2%	0%
Affective Psychoses	292.6	288.3	296.7	-2%	1%
Alcoholic Psychoses	43.9	65.0	64.8	21%	48%
Schizophrenic Disorders	135.3	149.6	128.2	0%	-5%
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 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	1,277	1,356	1,252	10%	-2%
	Adults Age 30-44	1,384	1,503	1,455	2%	5%
	Adults Age 45-64	1,843	1,940	1,956	3%	6%
	Seniors Age 65+	647	667	640	-4%	-1%
Crude Rates per 100,000 Population						
Age	Adults Age 18-29	944.3	942.8	834.3	7%	-12%
	Adults Age 30-44	980.7	975.9	931.5	2%	-5%
	Adults Age 45-64	1,006.9	961.4	963.3	2%	-4%
	Seniors Age 65+	862.1	781.3	758.4	-7%	-12%
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 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	2,837	2,807	2,720	-1%	-4%
	Male	2,313	2,658	2,583	8%	12%
Crude Rates per 100,000 Population						
Sex	Female	732.6	714.3	680.2	-2%	-7%
	Male	623.0	708.7	678.4	7%	9%
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 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	62	72	53	14%	-15%
	Black/African American	1,482	1,674	1,588	2%	7%
	White	3,382	3,511	3,476	2%	3%
Ethnicity	Hispanic Ethnicity	87	78	15	-6%	--
Crude Rates per 100,000 Population						
Race	Asian	169.2	188.5	136.4	6%	-19%
	Black/African American	712.0	799.2	755.6	0%	6%
	White	724.7	745.0	721.5	2%	0%
Ethnicity	Hispanic Ethnicity	170.8	159.7	--	-7%	--
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 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	1,556	1,591	1,489	5%	-4%
	Medicaid	371	384	475	12%	28%
	Private	2,774	3,070	2,742	-2%	-1%
	Self-Pay/Uninsured	442	416	590	14%	33%
Crude Rates per 100,000 Population						
Payer	Medicare	--	--	--	--	--
	Medicaid	--	--	--	--	--
	Private	--	--	--	--	--
	Self-Pay/Uninsured	--	--	--	--	--

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 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 therefore 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 466,517 (78%) adults age 18+ are not meeting the guidelines for fruit and vegetable intake,
    - An estimated 367,669 (61%) adults age 18+ are overweight or obese, and
    - An estimated 311,510 (52%) adults age 18+ are not meeting recommendations for physical activity.
- Please note that these estimates reflect general patterns based on statistical analysis of multiple years of survey data. 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. It is important to note many survey items are self-reported, or calculated/classified measures based on self-reported items.

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

Indicator		Virginia	Study Region
Estimates-Counts			
Estimated Adults age 18+		6,393,583	599,322
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	716,647	466,517
	Overweight or Obese	562,432	367,669
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	471,717	311,510
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	181,430	120,900
	Smoker	190,501	121,893
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	317,502	213,723
	High Blood Pressure (told by a doctor or other health professional)	263,073	173,391
	Arthritis (told by a doctor or other health professional)	217,716	144,910
	Diabetes (told by a doctor or other health professional)	81,643	49,458
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	172,358	118,602
	Fair or Poor Health Status	145,144	94,345
Estimates-Rates			
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	80%	78%
	Overweight or Obese	62%	61%
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	48%	52%
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	18%	20%
	Smoker	19%	20%
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	35%	36%
	High Blood Pressure (told by a doctor or other health professional)	30%	29%
	Arthritis (told by a doctor or other health professional)	24%	24%
	Diabetes (told by a doctor or other health professional)	9%	8%
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	19%	20%
	Fair or Poor Health Status	16%	16%

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 Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B. Data Sources for details.

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 therefore 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 5,101 (8%) youth age 14-19 and 18,287 (25%) youth age 10-14 met the guidelines for fruit and vegetable intake,
    - An estimated 17,221 (28%) youth age 14-19 are overweight or obese, and
    - An estimated 34,154 (56%) youth age 14-19 and 25,208 (34%) youth age 10-14 met the guidelines for physical activity.
- Please note that these estimates reflect general patterns based on statistical analysis of survey data. 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. See Appendix B for details.

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

Indicator		Virginia	Study Region
Counts (Estimates)			
High School Youth Age 14-19			
Total Estimated High School Youth Age 14-19		*654,462*	*61,176*
	Met Guidelines for Fruit and Vegetable Intake	54,707	5,101
	Overweight or Obese	179,050	17,221
	Not Meeting Recommendations for Physical Activity in the Past Week	363,586	34,154
	Used Tobacco in the Past 30 Days	118,572	11,020
	Had at least One Drink of Alcohol At least One Day in the Past 30 Days	178,173	16,398
	Felt Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	165,270	15,203
Middle School Youth Age 10-14			
Total Estimated Middle School Youth Age 10-14		*523,850*	*24,460*
	Met Guidelines for Fruit and Vegetable Intake	125,285	5,959
	Not Meeting Recommendations for Physical Activity in the Past Week	345,407	16,193
	Used Tobacco in the Past 30 Days	19,192	579
Rates (Percent Estimates)			
High School Youth Age 14-19			
	Met Guidelines for Fruit and Vegetable Intake	8%	8%
	Overweight or Obese	27%	28%
	Not Meeting Recommendations for Physical Activity in the Past Week	56%	56%
	Used Tobacco in the Past 30 Days	18%	18%
	Had at least One Drink of Alcohol At least One Day in the Past 30 Days	27%	27%
	Felt Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	25%	25%
Middle School Youth Age 10-14			
	Met Guidelines for Fruit and Vegetable Intake	24%	24%
	Not Meeting Recommendations for Physical Activity in the Past Week	66%	66%
	Used Tobacco in the Past 30 Days	4%	2%
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 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 98,499 residents of the study region were uninsured.
- The estimated number of uninsured children age 0-18 was 12,250 in the study region. Among uninsured children, it is estimated that roughly half 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 86,248 in the study region. Among uninsured adults, it is estimated that more than half 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	98,499
Uninsured Children Age 0-18	120,105	12,250
Uninsured Children Age 0-18 <=138% FPL	327,185	3,973
Uninsured Children Age 0-18 <=200% FPL	479,797	6,150
Uninsured Children Age 0-18 <=250% FPL	578,328	7,552
Uninsured Children Age 0-18 <=400% FPL	749,463	10,041
Uninsured Children Age 0-18 138-400% FPL	422,276	6,067
Uninsured Adults Age 19-64	893,456	86,248
Uninsured Adults Age 19-64 <=138% FPL	327,185	31,584
Uninsured Adults Age 19-64 <=200% FPL	479,797	46,316
Uninsured Adults Age 19-64 <=250% FPL	578,328	55,828
Uninsured Adults Age 19-64 <=400% FPL	749,463	72,348
Uninsured Adults Age 19-64 138-400% FPL	422,276	40,764
Estimated Uninsured Percent		
Uninsured Children Percent	6%	6%
Uninsured Adults Percent	17%	17%
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.		

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

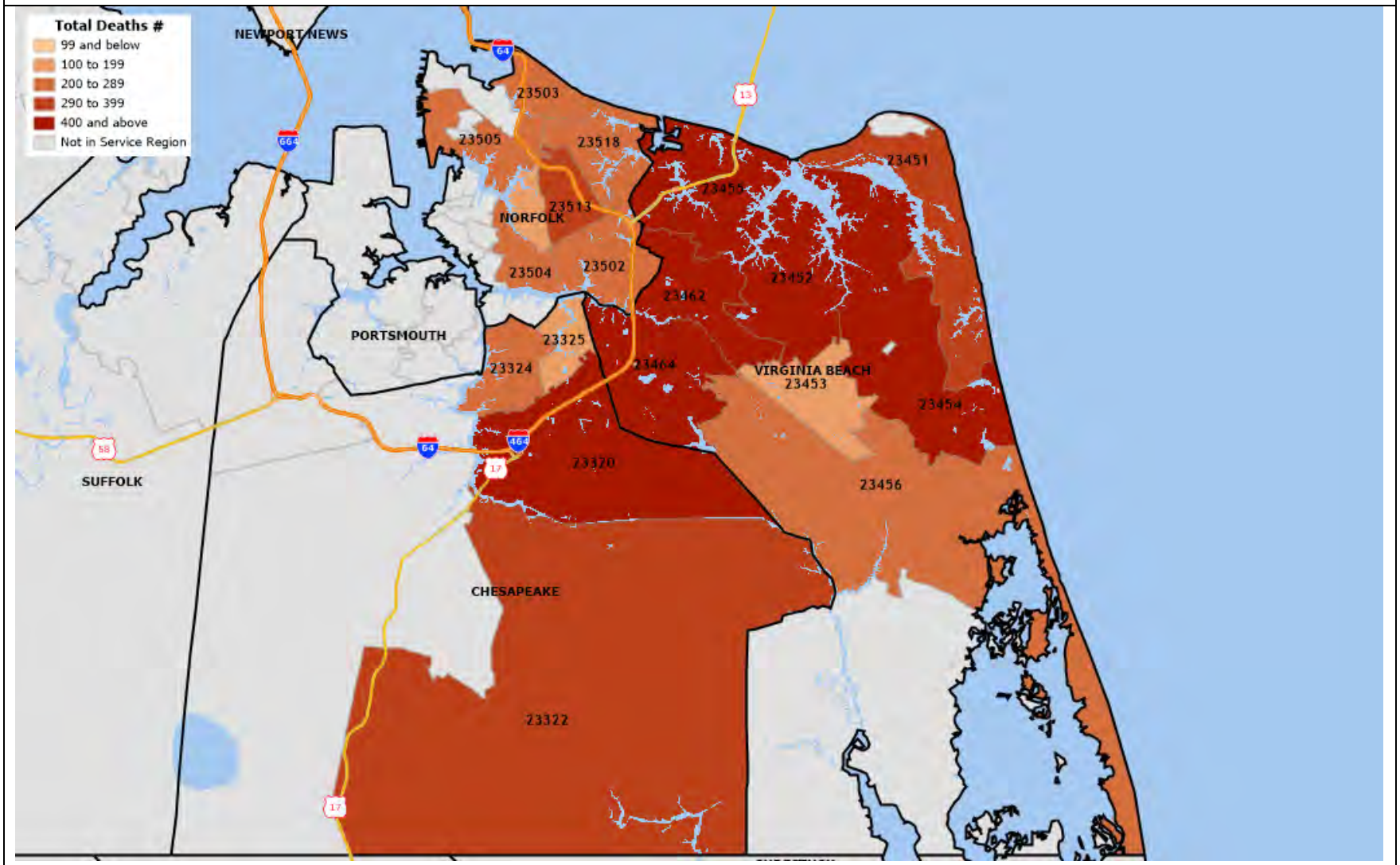
1. The maps and data include 20 zip codes, as identified by Sentara Leigh Hospital, most of which fall within the cities of Chesapeake, Norfolk and Virginia Beach. It is important to note that zip code boundaries do not automatically align with city/county boundaries, and there are some zip codes that extend beyond the county boundaries. Also, not all zip codes in each of the three localities were identified by Sentara Leigh Hospital as part of the Zip Code-Level Study Region.

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.

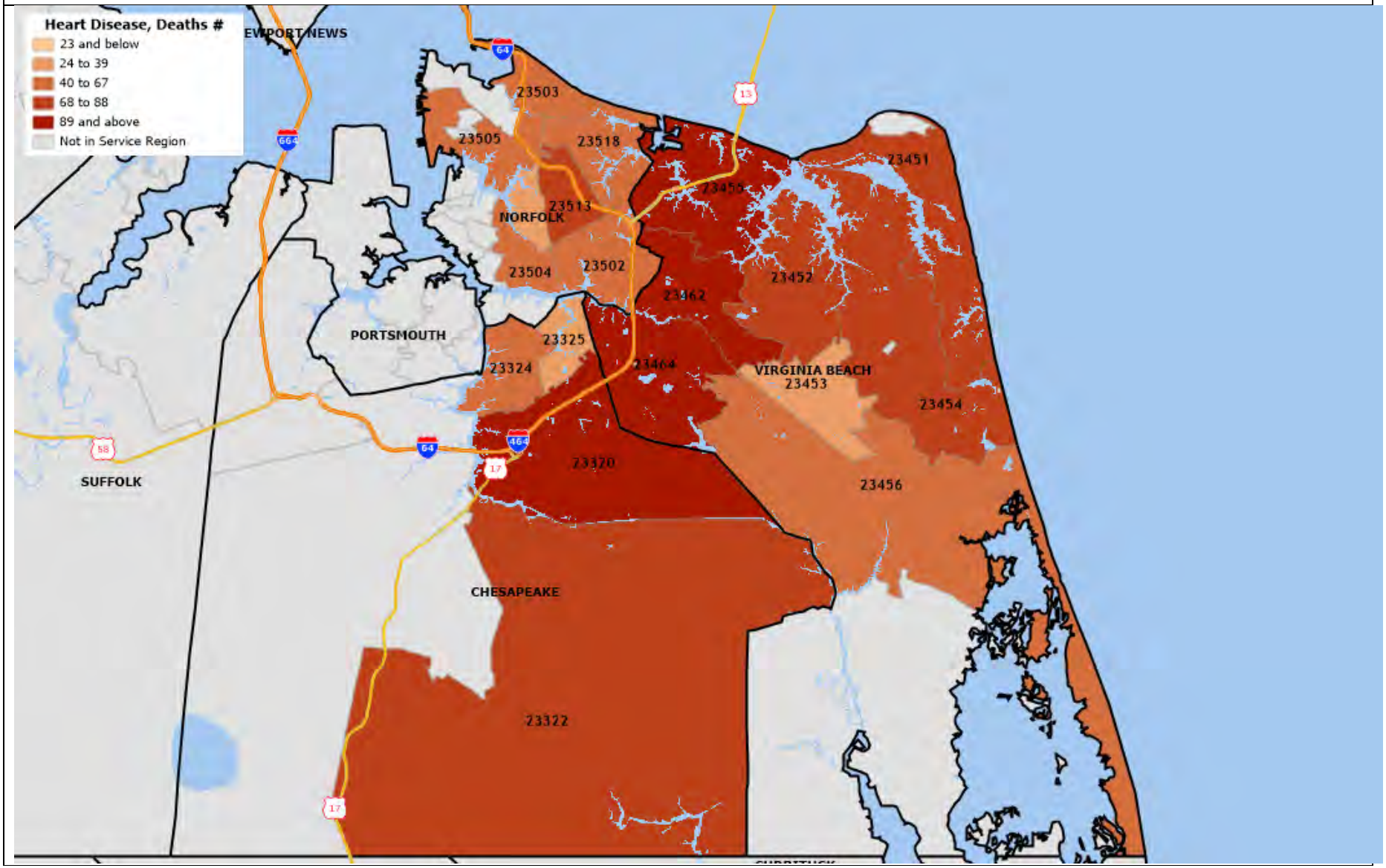
4. Zip Code-Level Study Region zip codes with zero values are noted.

Map 1: Total Deaths, 2013



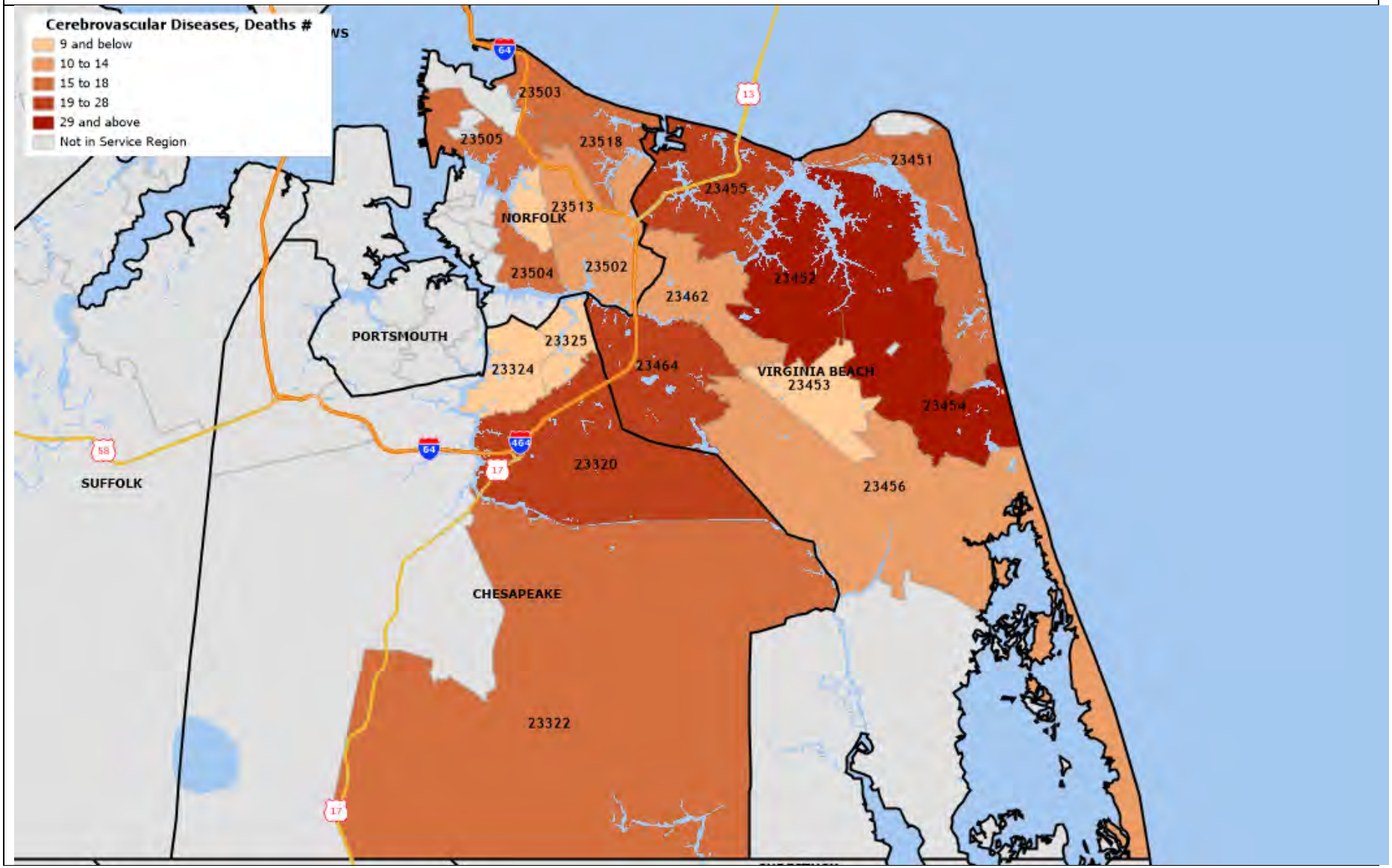
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.

Map 2: Heart Disease Deaths, 2013



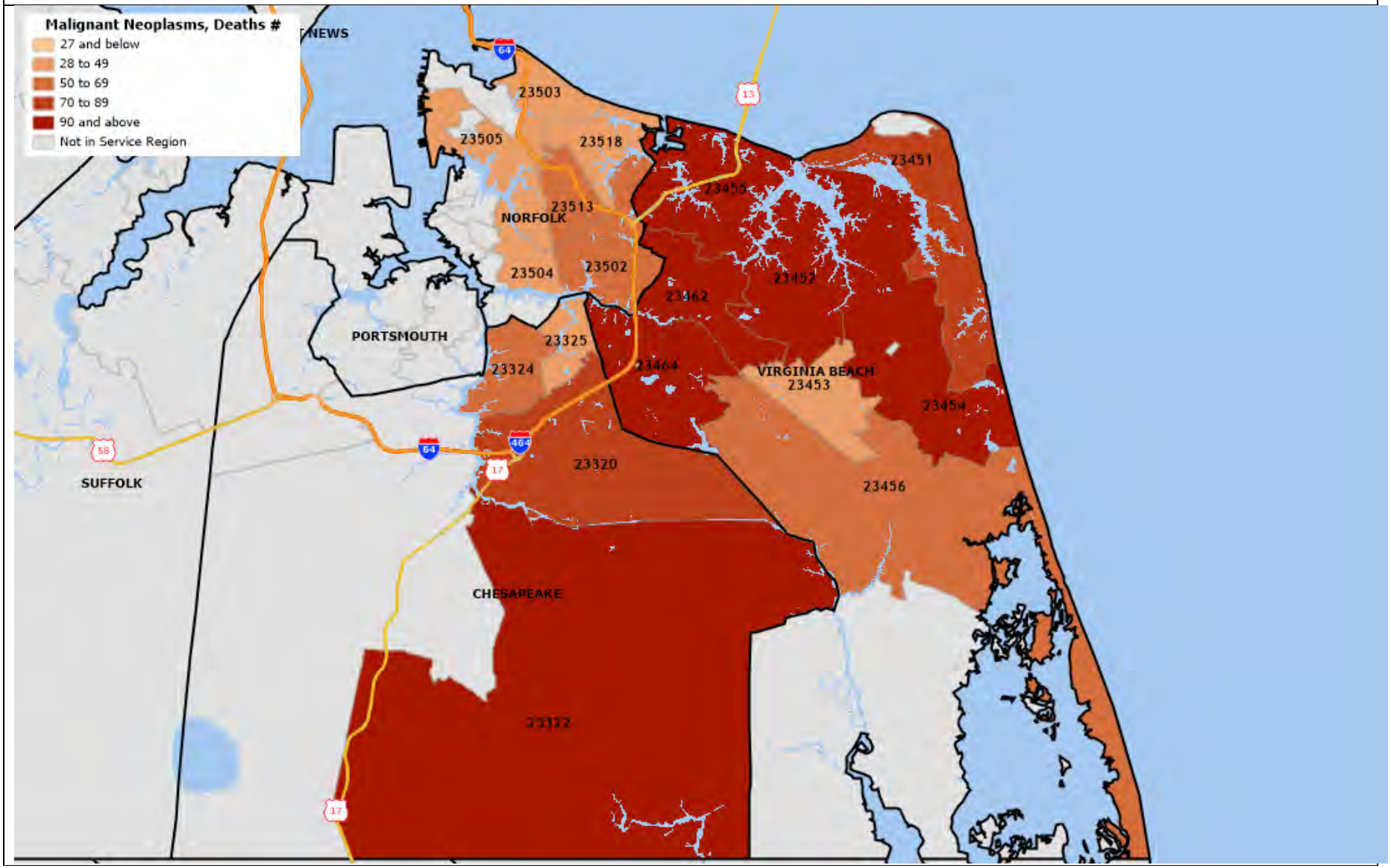
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported heart disease deaths for zip code 23463.

Map 3: Cerebrovascular Disease (Stroke) Deaths, 2013



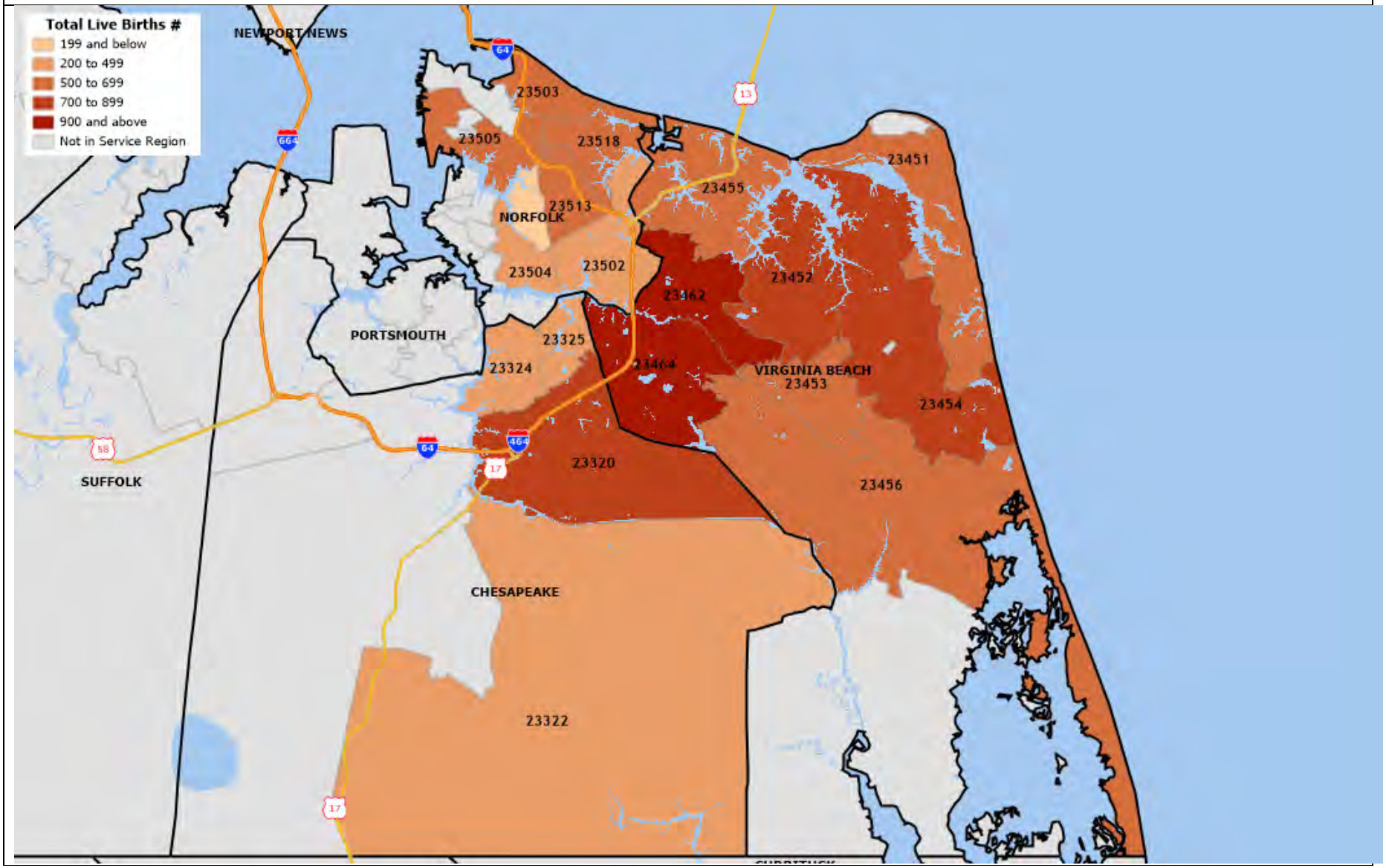
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported stroke deaths for zip code 23463.

Map 4: Malignant Neoplasms (Cancer) Deaths, 2013



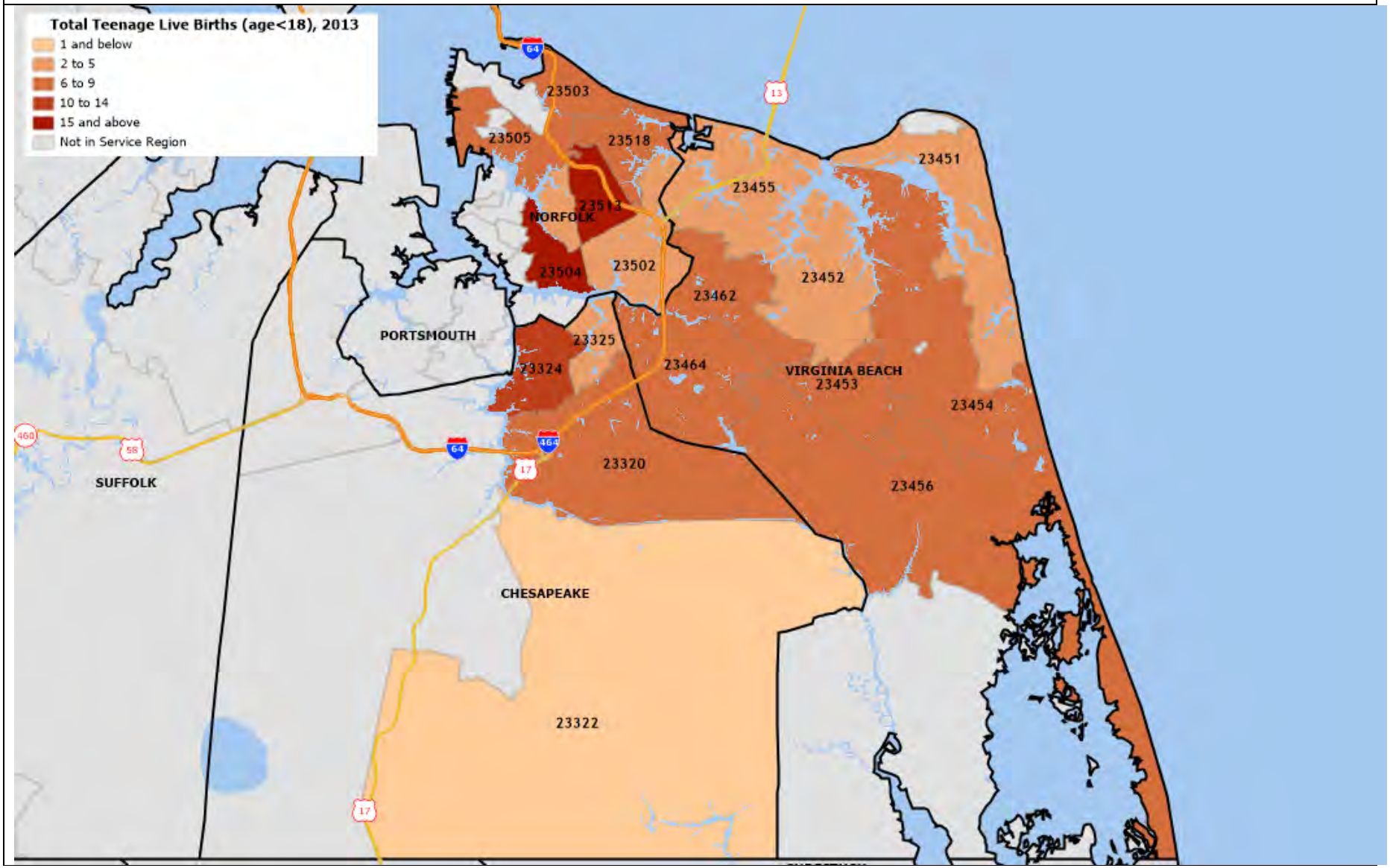
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported cancer deaths for zip code 23463.

Map 5: Total Live Births, 2013



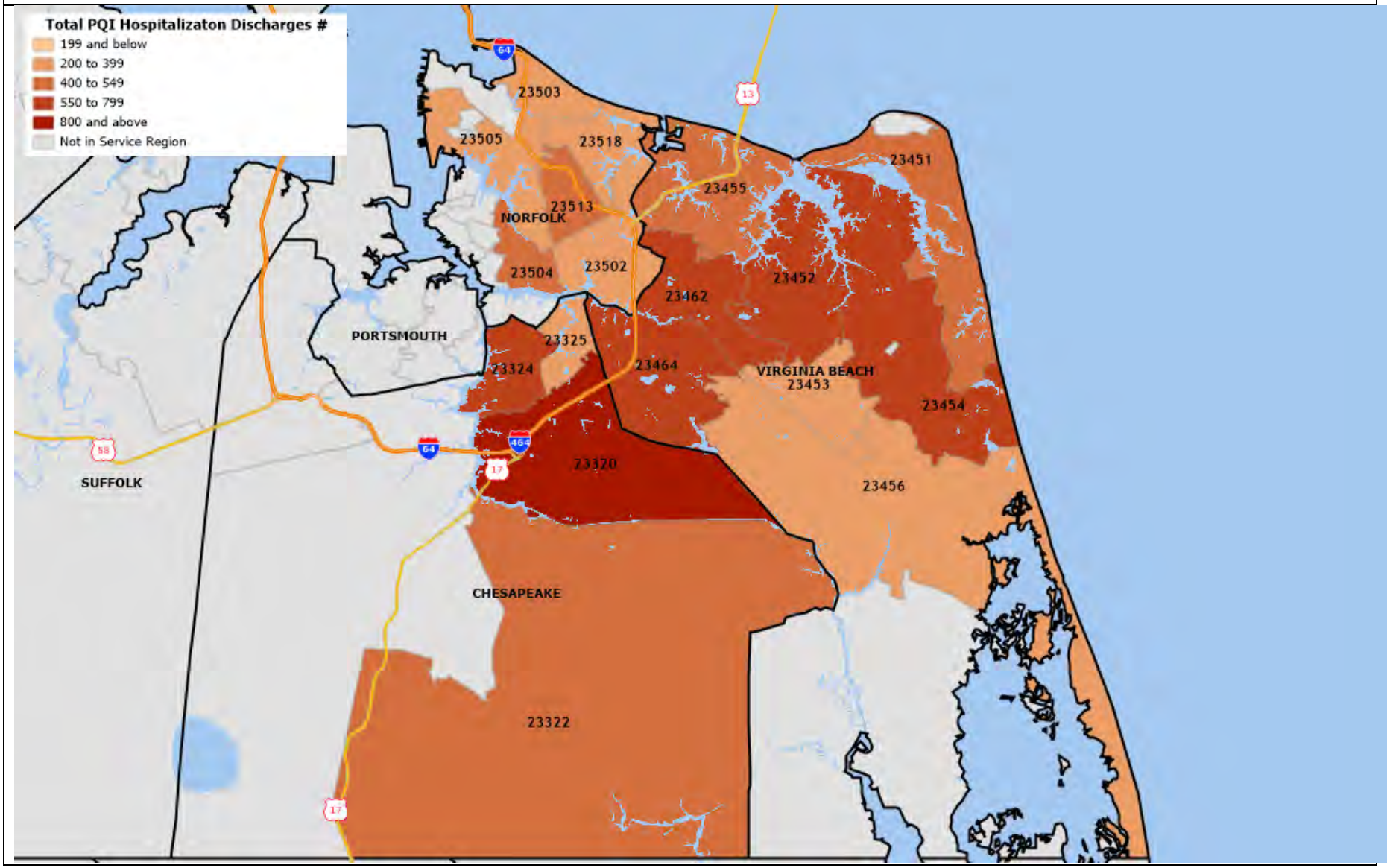
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. Notes: There were no reported births for zip code 23463.See details in methods in Appendix B.

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



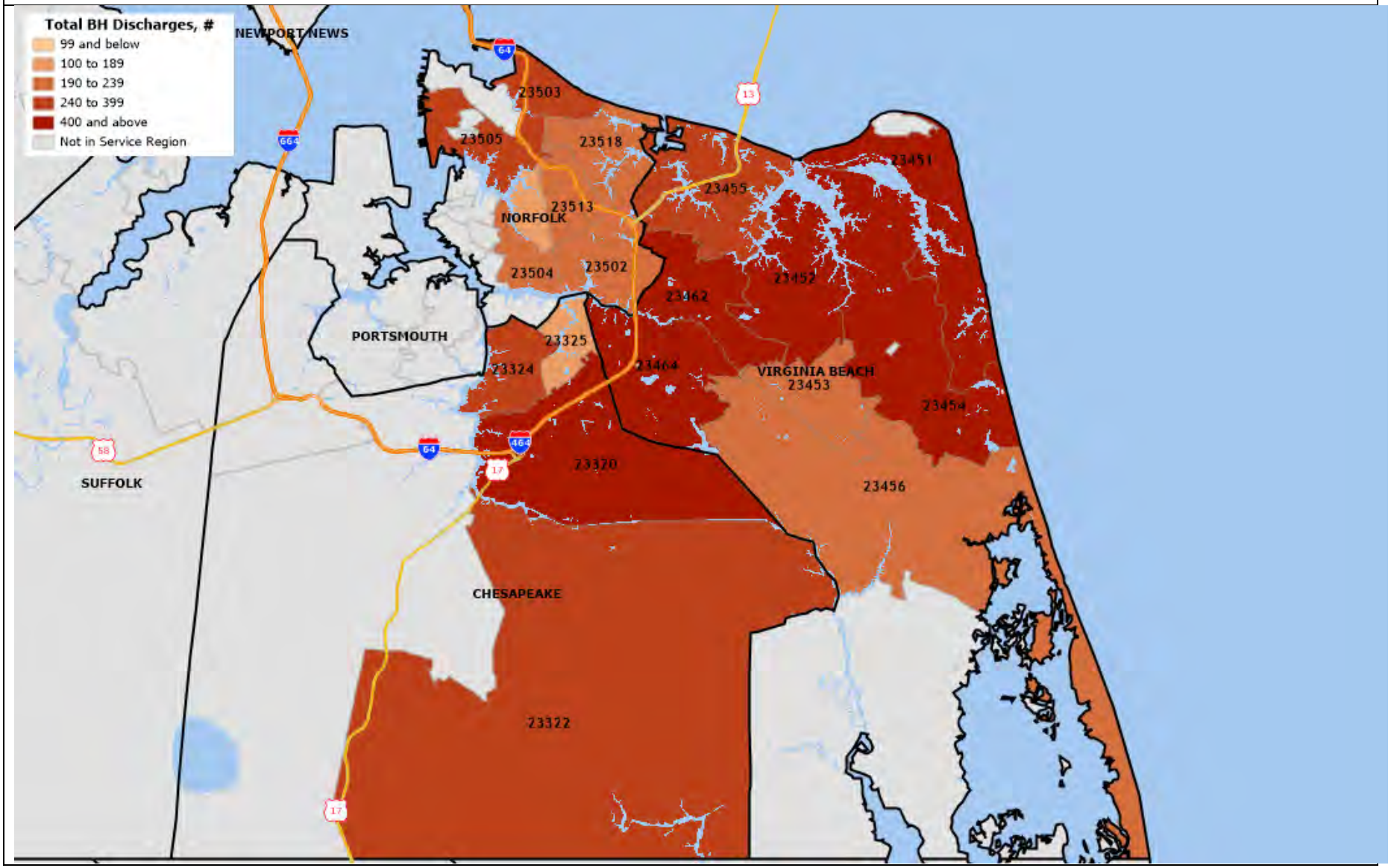
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported teenage live births for zip codes 23322 and 23463.

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



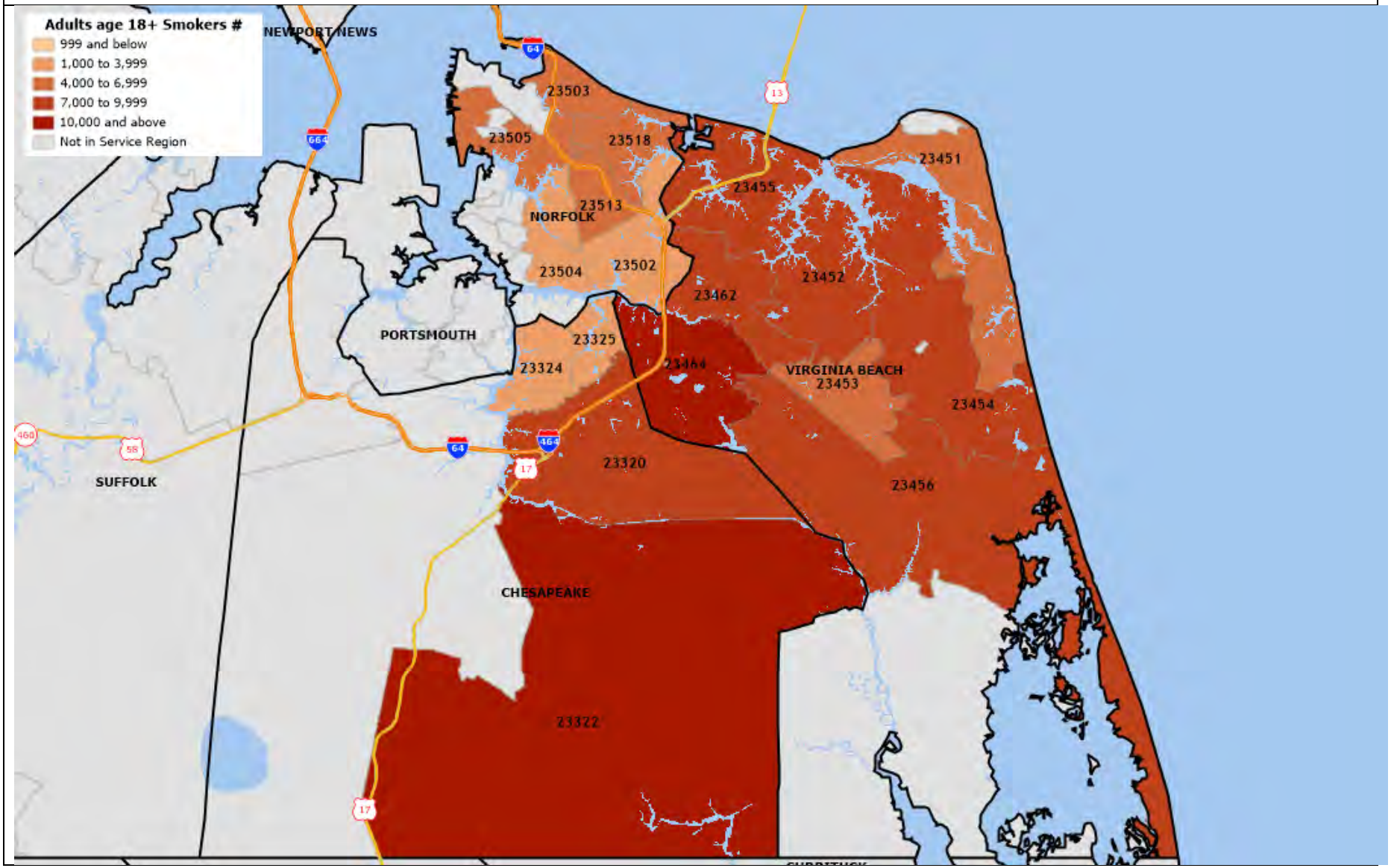
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

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



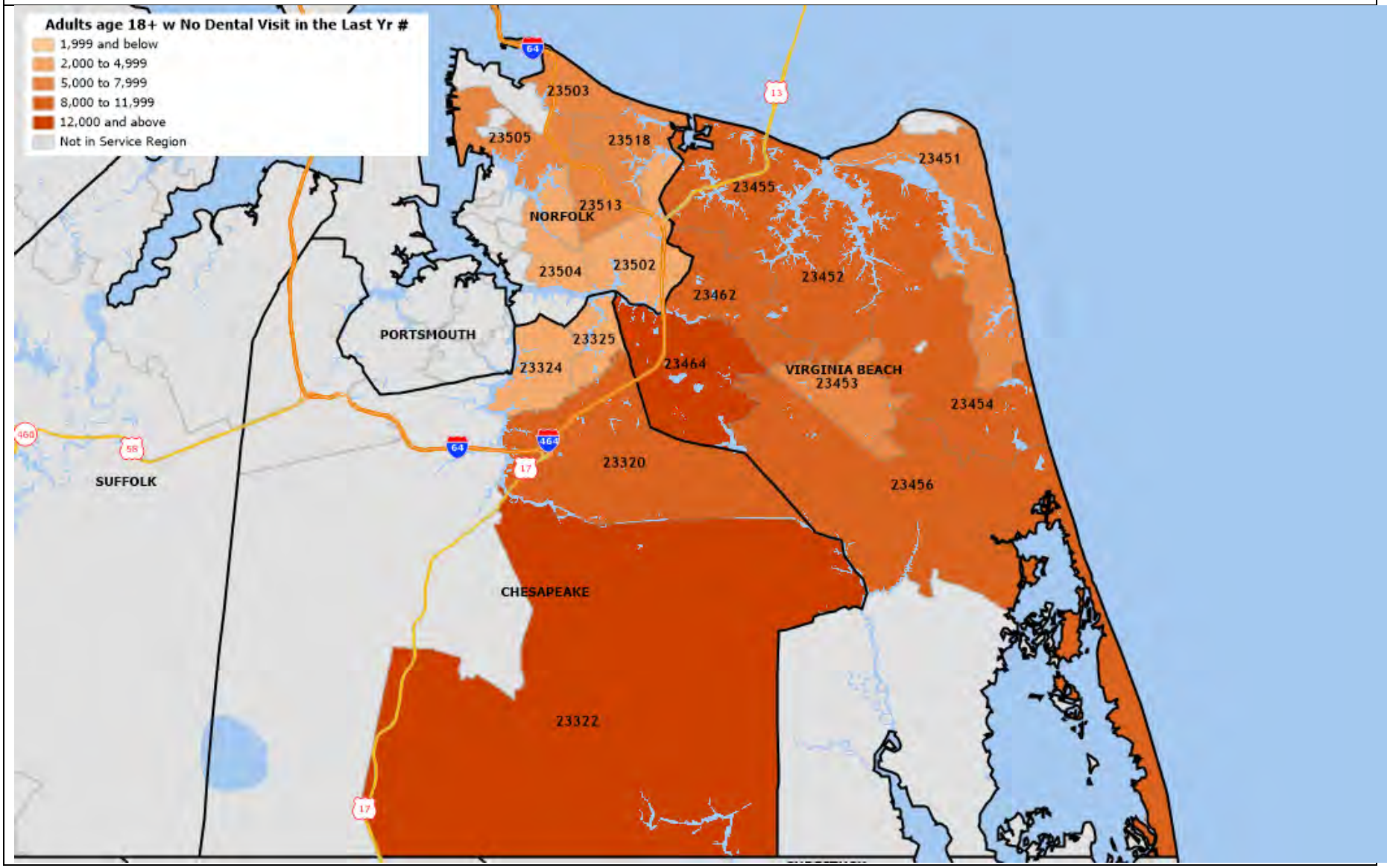
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.

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



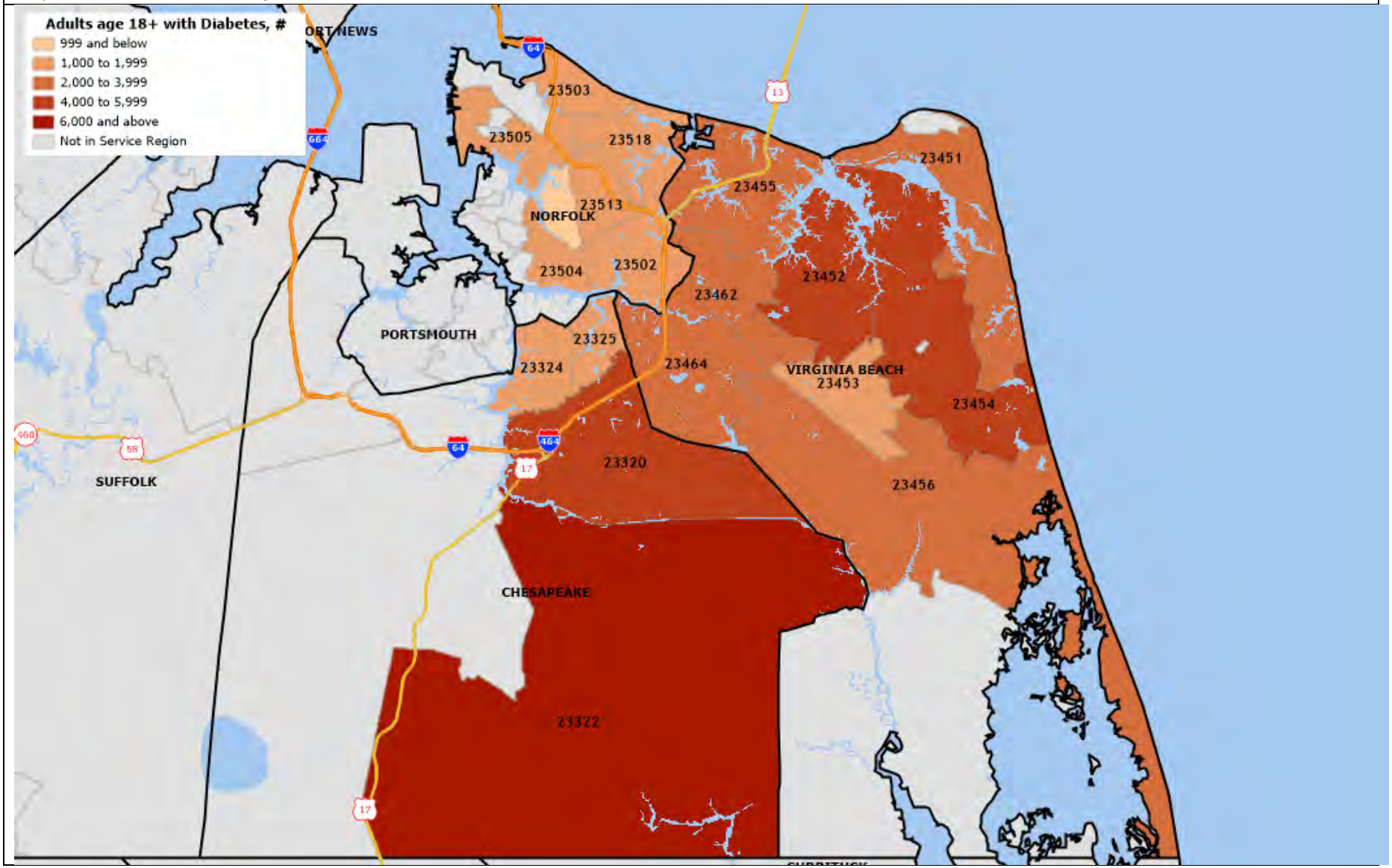
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

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



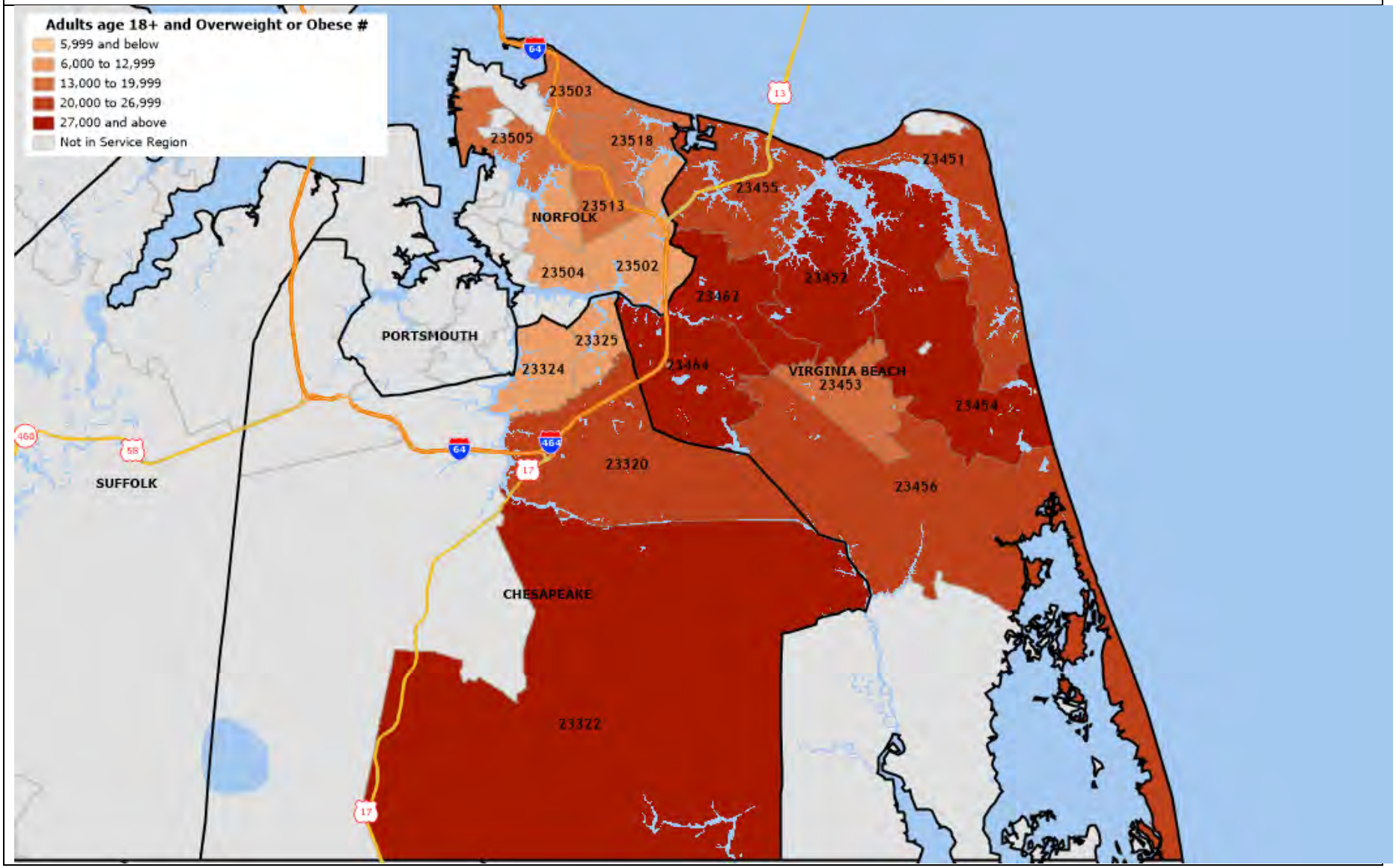
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

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



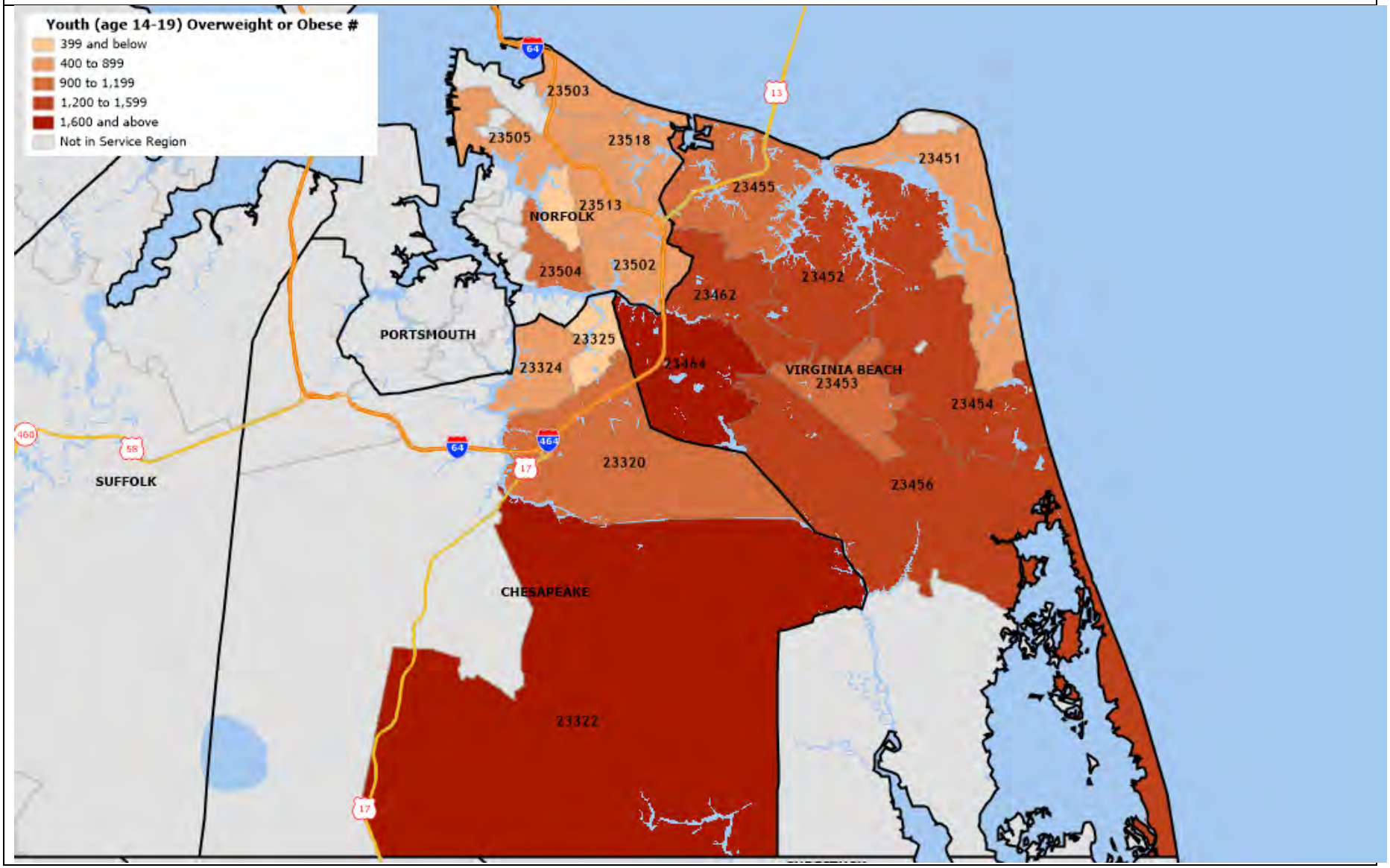
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

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



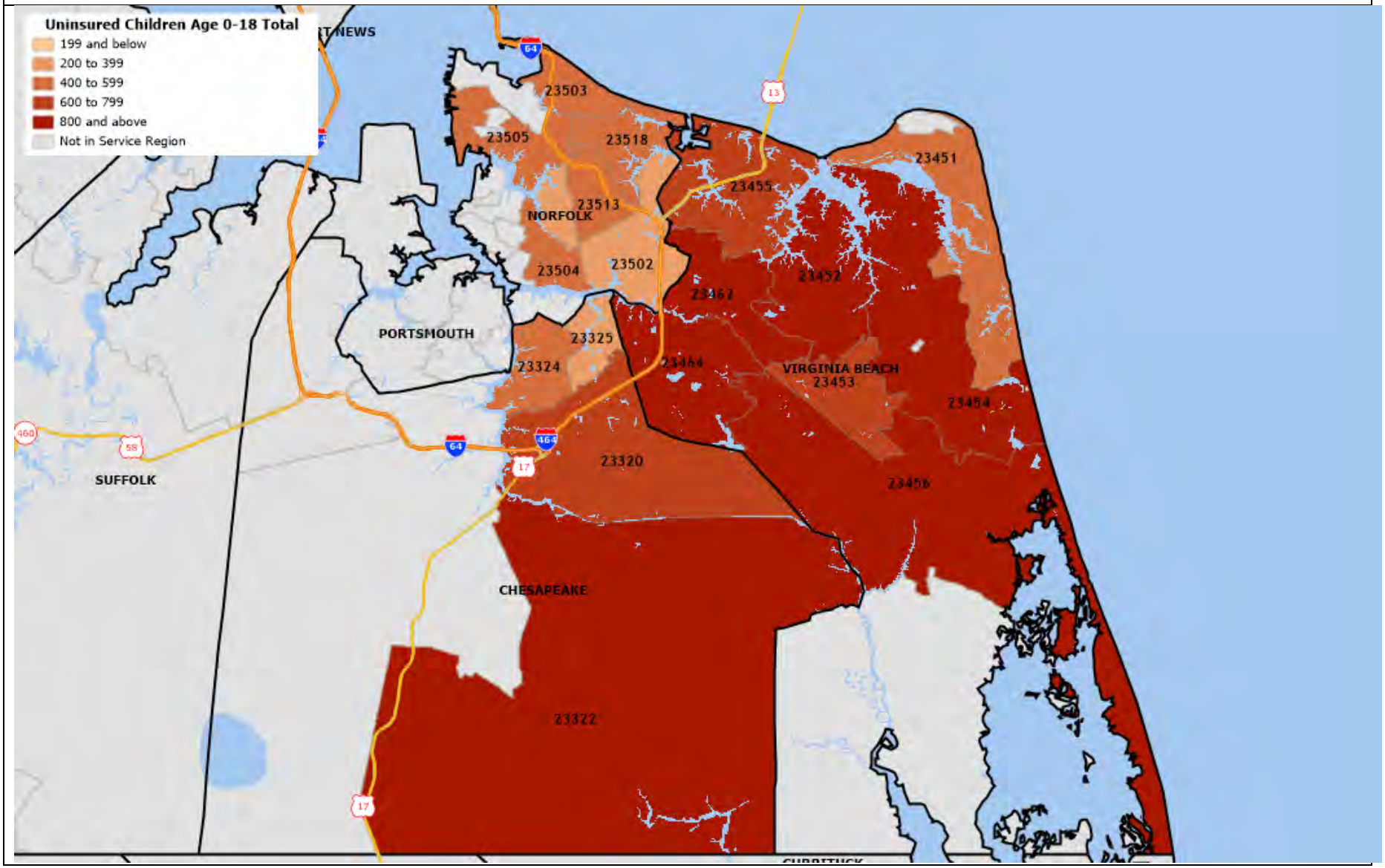
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B.

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



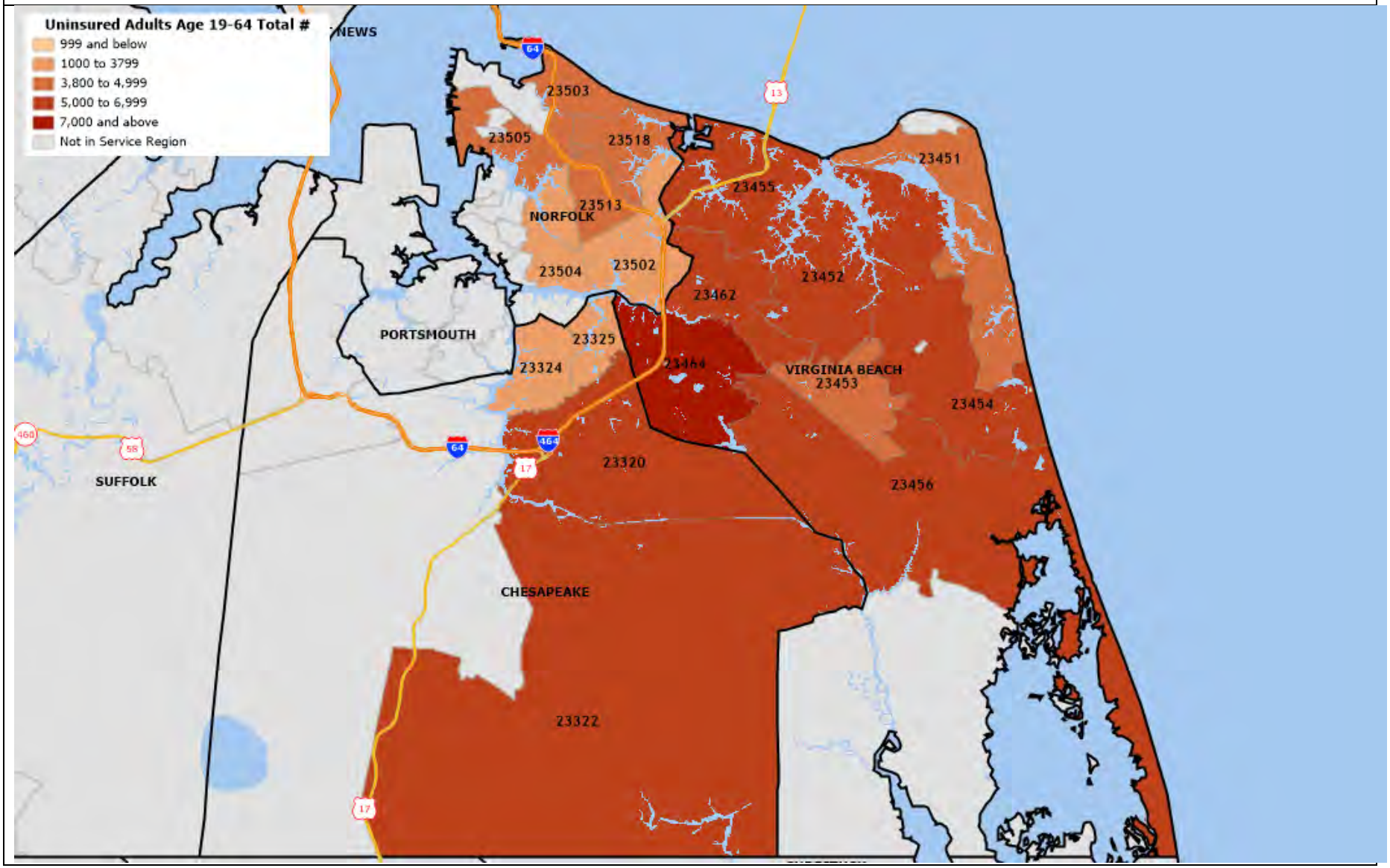
Source: Estimates produced by Community Health Solutions using Virginia Youth Risk Behavioral Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B. Data Sources for details.

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 (2013) 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 death record 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 death record 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. 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. *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.

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 Leigh Hospital, 43% of overall South Hampton Roads survey respondents indicated they work with the hospital, which includes 52 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 Leigh Hospital are displayed on the following pages in table form. First, the list of community stakeholders participating in the survey are displayed below.

Sentara Leigh Hospital - Community Stakeholder Survey Participants by Organization	
Access Partnership	Norfolk Fire Rescue
American Cancer Society	Norfolk Plastic Surgery
American Heart Association	Old Dominion University School of Dental Hygiene
Atlantic Anesthesia	RG Electric Company, Inc
Beach Health Clinic	Senior Services of Southeastern Virginia
Bon Secours Hampton Roads	Sentara Health Plans, Optima Health
Bon Secours Health System	Sentara Leigh Hospital (SLH)
Chesapeake Regional Medical Center	Sentara Medical Group
City of Norfolk	South University
Eastern Virginia Medical School (EVMS)	The Planning Council
ECPI University, MSN Program	The Union Mission
Emergency Medical Services (EMS)	Tidewater Community College
Emergency Physicians of Tidewater (EPT)	Virginia Beach Department of Public Health
FFG	Virginia Beach Fire Department
Foodbank of Southeastern VA	Virginia Beach Rescue Squad Volunteer Paramedic
Gastrointestinal & Liver Specialists of Tidewater (GLST)	Virginia Department of Health
Judeo-Christian Outreach Center	Virginia Oral Health Coalition
LifeNet	Virginia Wesleyan College
Norfolk Community Services Board	YMCA of South Hampton Roads
Norfolk Department of Public Health	Not Provided

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. Fifty-one participants responded to this question.

Frequency Rank	2016 Most Important Health Problem in Community	% of Participants Selecting Item
1	Mental Health - Behavioral Health Conditions (e.g. depression, anxiety, etc.)	75%
	Obesity	75%
3	Diabetes	67%
4	Heart Disease	63%
5	Alcohol Use	57%
	Substance Abuse (prescription or illegal drugs)	57%
7	High Blood Pressure / Hypertension	55%
8	Cancer	53%
9	Tobacco Use	47%
10	Accidents / Injuries	45%
11	Chronic Pain	39%
	Infant and Child Health	39%
13	Dementia / Alzheimer's Disease	37%
	Dental / Oral Health Care	37%
	Violence - Domestic Violence	37%
16	Stroke	33%
17	Prenatal and Pregnancy Care	31%
	Sexually Transmitted Diseases	31%
	Violence - Other than Domestic Violence	31%
20	Orthopedic Problems	29%
	Respiratory Diseases (e.g. asthma, COPD, etc.)	29%
22	Physical Disabilities	28%
23	Infectious Diseases	26%
	Intellectual / Developmental Disabilities	26%
	Teen Pregnancy	26%
26	Neurological Conditions (e.g. seizures, multiple sclerosis, traumatic brain injury, etc.)	24%
	Renal (kidney) Disease	24%
28	HIV / AIDS	22%

	Hunger	22%
30	Arthritis	20%
	Bullying	20%
	Drowning / Water Safety	20%
	Environmental Health (e.g. pollution, mosquito control, water quality, etc.)	20%
34	Autism	16%

Mental and behavioral health and obesity topped the most important health problems selected by community stakeholder participants, followed by diabetes and heart disease.

Nine 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
• Metabolic syndrome
• 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
• Wound healing/chronic wounds
• 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
• As a volunteer paramedic I am exposed to all of these issues and each is just as important as another to that individual that it is affecting at the time. Obviously, some of these issues last a lifetime. Take for incident car accidents - not all are just bad driving, but so many are caused because of medical conditions, alcohol/drug abuse, elderly who should know longer be driving, etc... I see a real need for more mental health facilities. So many patients we bring in with

mental health/alcohol/drug abuse do not necessarily need a jail nor always a hospital but a place they can go to get help and counseling. This is to include chronic pain and the over use/abuse of prescription pain medication. • Sepsis - this continues to be a real problem in all ages of the population, however, I see it a great deal in our elderly. More early recognition programs for families need to be in place. • More help needs to be given to people who cannot afford medications for such chronic illnesses as diabetes. We have repeat offenders who for whatever reason do not take their medications or cannot afford insulin pumps that is critical to their everyday life. • Drowning is definitely an issue that we should always be addressing in our community due to all of our natural resources and backyard accessibility to pools. • Obesity is huge in our community. We need to continue to work on improving this whether through workplace incentives, insurance incentives, medical payment incentives...; something because so many of the other diseases HTN, orthopedic problems, heart disease, diabetes, and even mental health and bullying etc... I feel may be associated with obesity. ----Nutrition
• 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-nine participants responded to this question.

Frequency Rank	2016 Community Services Needing Strengthening	% of Participants Selecting Item
1	Mental Health - Behavioral Health Services	59%
	Services for Vulnerable Populations (e.g. uninsured / underinsured, migrant workers, homeless, etc.)	59%
3	Care Coordination and Transitions of Care	55%
4	Chronic Disease Services (e.g. diabetes, high blood pressure, etc.)	47%
5	Aging Services	45%
6	Health Care Insurance Coverage	43%
	Substance Abuse Services	43%
8	Dental / Oral Health Care Services	41%
9	Early Intervention Services for Children	35%
10	Chronic Pain Management Services	31%
	Long Term Care Services	31%
12	Health Promotion and Prevention Services	29%
	Self Management Services (e.g. nutrition, exercise, taking medications)	29%
	Services for Caregivers	29%
15	Public Health Services	27%
	Social Services	27%
	Transportation Services	27%
18	Maternal, Infant, and Child Health Services	25%
	Veterans Services	25%
20	Food Safety Net (e.g. food bank, community gardens, school lunches, etc.)	22%
	Hospice Services	22%
	Primary Care Medical Services	22%
23	Domestic Violence Services	20%
	Home Health Services	20%
	School Health Services	20%
26	Cancer Services (e.g. screening, diagnosis, treatment, etc.)	18%
	Environmental Health Services	18%

28	Intellectual / Developmental Disabilities Services	14%
	Public Safety Services	14%
30	Family Planning Services	12%
	Hospital Services (e.g. inpatient, outpatient, emergency care, etc.)	12%
	Pharmacy Services	12%
33	Workplace Health and Safety Services	10%
34	Specialty Medical Care Services (e.g. cardiologists, oncologists, etc.)	8%
35	Physical Rehabilitation	6%

Mental health 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
• 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"
• with all of the abuse of prescription / non-prescription drugs in this area, chronic pain management could be an area to improve
• I believe that management of chronic wounds could be improved upon.
• We still have many elderly who are living by themselves-- we need more affordable transitioning and not just rehab centers that have understaffed and at times unqualified people working in them. Many of our local rehab facilities need updating and have better facilities management and even at times care staff. So many times I walk into a facility that smells of urine and there is no place that should be like that. It is a matter of cleanliness. The staff quite often say this patient isn't mine so I don't have information on him. It is disgraceful the care our elderly, or people with severe head injuries, severe orthopedic injuries at times receive in facilities. • Cardiac arrests - we can do better! AHA has come out with a phone app that shows defibrillators and their locations, and will go off when a cardiac arrest is nearby prompting a citizen to respond if they are close by to initiate CPR. I think this is something Sentara should help the region supply with our 911 system.

• In addition, I feel Sentara should consider lobbying or delegate etc.. for such things as requiring all people who get a DMV license needs to have gone through a cpr class and show proof prior to getting their license and that it must be maintained. So every time they renew, they must renew their CPR. • Also, I feel they should lobby the localities and request that as part of getting a business license if they have X number of employees they are required to purchase and maintain and AED. • Para-medicine is something that our community should look at adopting. I think this could help our Emergency Depts as so often many people that come in are for "sick visits" and it is something if a Medic were to have been doing preventive stops may could avoid so many of the unnecessary calls to 911 and stops to the ER. • Stroke Bus - http://www.emsworld.com/press_release/12178068/excellance-reveals-mobile-stroke-unit our area may benefit from something such as this.
• 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

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-six participants responded to the first question, while 33 participants responded to the second question.

Vulnerable/At-Risk Populations	Vulnerable/At-Risk Geographic Regions
• Uninsured/ underinsured • Low income • Elderly • Individuals with mental health issues • Homeless • Immigrants and non-English speakers • Individuals with disabilities • Children	• Low income regions • Norfolk, including the Oceanview region and other specific areas noted • Virginia Beach • Portsmouth • Suffolk and Chesapeake, rural areas noted

Uninsured/underinsured, low income 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. Low income regions and cities throughout the area 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)
• There still seems to be many adults without health insurance who can not afford dental care services. This is an ongoing issue in our community.
• Substance abusers; mentally ill
• low health literacy populations , uninsured , indigent and obese populations, increased aging population
• The uninsured in our community still have a challenging time recognizing they need care and obtaining it. Person who speak other than English are at a great disadvantage in our community as translation services are limited and there is a dearth of multilingual service providers.
• Those living in poverty
• uninsured
• Seniors and Children • Working Poor
• There are disparities in health outcomes and access to healthy social and environmental conditions to promote health for low income and minority populations, particularly African Americans. Also, access issues for Hispanic and immigrant populations. Also, individuals with mental health issues are vulnerable.
• yes, they can't afford the federal insurance program and make to much to qualify for medicaid

• those without medical insurance
• 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.
• Homeless
• 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
• Elderly without support systems, difficulty in accessing services
• The Aged who have no family care
• no
• Homeless
• low income, low education residents
• Inadequately insured individuals
• Of course the poor are without health services as they have no insurance.
• Low Income/elderly.
• Home support for those not ready for, no financially capable, or refusing skilled care facilities.
• Populations at risk include those who are in poverty, who do not know how to navigate the health system, who are in need of health/wellness education and disease prevention education- such as the importance of exercise and fresh fruits/vegetables.
• There continues to be a disconnect between the inpatient and outpatient management of hospitalized patients that are cared for by hospitalists
• 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
• Not insured/underinsured - any specialty service, screening/preventive care, pharmacy services (low cost or free medications).
• lower income families
• We are between two Union Missions and consistently face barriers with these populations. Also, the lack of SNF options in the areas for some of our patients causes concern for them.
• Elderly, Underprivileged and Mental Health are the populations I would say we still have a lot of needs for service. • Elderly - Paramedicine could help by stopping by and making sure they are taking their meds, do an in home fall assessment. Continue with stroke awareness, heart attack awareness out reach programs. • Mental health - Need more facilities as they do not always need jail time but they need counseling and detox. - Our community does NOT have enough beds and staff to take care of the demand. We see kids as young as 5 with suicidal ideations - we need more beds and staff for mental health.

• Underprivileged - need education on health issues and need places to go for everyday medical care with easy access and leave the ER's for emergencies.
• uninsured, under-insured, low-income
• Pediatric population; they only have one place to go, and it is not in your facilities.
• 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
• There are 11 census tracts within Virginia Beach that have a life expectancy of less than 75.0 years. They live on average 10+ years less than those in the highest life expectancy tract. These include the following: 040600, 041002, 042801, 044200, 040200, 044806, 040402, 045408, 046005, 040801, and 041003.
• Public housing communities; senior neighborhoods
• South Norfolk - not enough primary care
• Calvert Square, Tidewater Park, Southside, Suffolk, Portsmouth
• We have multiple neighborhoods throughout the City that are vulnerable.
• Yes, several. East Ocean View is one that comes to mind
• uncertain
• 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.
• Virginia Beach Oceanfront
• There are pockets throughout the area
• Ocean View, Berkley
• have no info about this..
• low income 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.
• Economically challenged and homeless in the Virginia Beach Oceanfront area, the northwestern secontion of the Virginia Beach and Plaza/Green Run/ Salem areas.
• East Ocean View area of Norfolk, Virginia Beach Blvd stretch between Lynnhaven Blvd and the Oceanfront.
• Generally low income neighborhoods need more intrusive intervention strategies
• Norfolk, Newport News, Portsmouth, Hampton
• Yes. Impoverished areas. Low income. Unemployed.
• Lower income neighborhoods in all of the cities and rural communities in Suffolk, Chesapeake and Virginia Beach

• I have witnessed all areas of Southampton Roads Virginia in need of oral healthcare services
• Norfolk, Portsmouth
• Public housing developments and surrounding neighborhoods; northern part of Norfolk City that has a rising immigrant population; older neighborhoods with low income families.
• rural areas of Suffolk and Virginia Beach
• Between the two missions
• Jamestown Commons - Military Highway has many underprivileged housing areas that are part of the Virginia beach community, Birdneck area - a lot of homeless also live in this area, Campus East, and those neighborhoods around Wesleyan and Aragona, Plaza near Plaza apts, Lake Edward, Luther Manor Nursing home, Etc..
• see above. zip code is very much a predictor of health
• All of the neighborhoods that you serve.
• 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-seven participants responded to the first question, while 35 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/lanes, community recreation centers, gyms, and YMCA • Safety net providers/clinics, accessible medical and dental care and facilities • Health Department, EVMS and other higher education institutions • Emphasis on collaborations, partnerships, institutions, and people	• Built resources to improve the walkability and bikeability of communities • Mental health and substance abuse services/facilities • Assets related to wellness and obesity prevention (increased access to healthy foods/venues, more grocery stores in underserved areas, education, wellness coordinators, safe parks and recreation centers to exercise) • Assets focused on improving medical and preventive care to the indigent and uninsured/underinsured population • Improved public transportation • Homelessness resources

Built resources and accessible medical care 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, mental health and substance abuse services/facilities, and assets related to wellness and obesity prevention 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 .
• For Virginia Beach, the most influential resource we have are our amazing parks and recreation areas. We have an Outdoor Plan, a Bikes and Trailways Plan and a Complete Street policy. These all help promote active living in our community. We also have amazing partnerships and collaborations.
• people
• Chesapeake Regional Medical Center, Chesapeake Public Health Department, YMCA, Chesapeake Care Free Clinic
• Natural resources, built resources, evms
• Bike trail in Norfolk
• There is a lot of interest and support at this time for efforts to improve community health by Norfolk residents, employees and leadership.

• access to fresh produce, many areas are a food desert
• people and institutions
• All of the above. Each needs to be present to create a culture of health.
• 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.
• Human Services, Homeless Providers, Health Providers
• 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
• People are the most important part as they play a role in ALL other aspects of care
• prevention care, health,dental
• More bike and walking trails
• People
• 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.
• Bikeways, parks, pools, sports teams for all ages. Group fitness programs. Nutrition and lifestyle support programs.
• Parks, rec centers, higher education institutions.
• Safe places to exercise, accessible medical facilities
• Programs and institutions
• The well equipped/staffed hospitals that we have.
• 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
• Recreation centers with modest fees.
• 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
• Green spaces and sidewalks or trails - safe ones (good lighting, not too secluded, patrolled) that encourage walking and allow people to safely walk more places; better public transportation.
• Health and Wellness facilities/YMCAs, Sentara network, public parks/recreation centers, walking friendly neighborhoods,
• Walk trails, YMCAs, Missions (more places for them to go), more outpatient areas where they can seek care such as therapy
• Yes
• 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
• We are sorely lacking mental health services. With the increasing problem with substance abuse, we need more treatment programs as well as an integrated approach to mental and physical health.
• More walking trails, bike share programs
• Mental health facilities, good public transit, bicycle trails
• Safe Parks for children, walking trails
• Assets to support mental health needs is particularly lacking.
• Mental health, addition treatment, homelessness-particularly for families or single mothers with children,
• Walking trails, green spaces
• 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.
• none
• 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
• do not know of any from personal experience
• free dental
• services for older adults
• Mental health
• some sort of collaborative community analytic and needs identification capability
• Bike and pedestrian paths
• Health insurance
• In home or easy access follow up and compliance care for patients with chronic illness (diabetes, CAD, obesity,...). Especially for low income families and those with less than a high school education.
• Improved walkability and bikeability. Improving access to fresh fruits and vegetables. Encouraging employers to promote physical activity during the work day.
• Safe places to exercise for some of the more vulnerable zip codes
• Better organized chronic wound care management.
• education
• Sidewalks
• Sidewalks.
• 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.
• Mental health

• Free clinics
• Regular grocery stores in or near low income areas (not a convenience store or small independent grocery store that sells mostly packaged food on shelves). • Better transportation resources for people with small children, the elderly, or people with access and functional needs.
• Access to fruits and vegetables in some urban and rural areas
• Paramedicine, • AHA App - CPR, - Pulse Point • AED program for businesses and churches (large meeting areas and recreation areas, • Stop the Bleed program • Sepsis Program • More stroke awareness and heart attack awareness presenters to go to church groups, rotary clubs, etc... to present. • Facilities for Mental health
• collaboration among existing orgs and agencies will increase collective impact and improve outcomes.
• Safe walking areas at night

Additional Ideas and Suggestions

As an optional open-ended question, additional ideas or suggestions for improving community health were asked to be shared. Fourteen 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
• access to dental services for adults is also lacking.
• 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
• 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.
• Obesity and poor nutrition contributes to a host of problems and should be addressed community wide.
• Increase collaboration between the health systems and partners to collectively improve the health of the community.
• As a physician that relies on Sentara Norfolk General Hospital, primarily, I continue to be troubled by a problematic discharge planning service. Hospitals are "punished" for 30-day readmission, not the physicians. As such it behooves our hospitals to make certain that all consultants caring for a patient are informed about a patient discharge and are asked about what their follow up should be. I provide a lot of consultative services. I see my patients/consults every day. It is NOT uncommon that I will make my rounds and find out that my consult patient has been discharged! No formal follow up, no requests for post-hospital wound

care orders. Our discharge planners rely upon our hospitalists to contact each and every consultant and do this. This task would be better performed by the discharge planner assigned to the specific patient.
• As a college, and community partner, all issues and concerns impact the welfare of our institution and area.
• 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
• Feel free to contact me if you have any questions regarding any of my responses. [*Phone number redacted*]
• 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.

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.

Three Sentara Leigh Hospital focus group sessions were held in 4th quarter 2016. The number of participants ranged from 7 to 40.

1. Sentara Leigh Hospital – Patient Family Advisory Committee
2. Sentara Leigh Hospital – Leigh Management
3. Sentara Leigh Hospital – Admin Strategy

SLH also used information from the City of Norfolk Department of Public Health Community Health Needs Assessment, which followed the Mobilizing for Action through Planning and Partnerships (MAPP) process that engaged city and community partners.

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?	• Mental health, alcohol abuse, drug abuse, depression • Chronic diseases-hypertension, diabetes, stroke, heart disease, obesity • Chronic pain • Dementia, Alzheimer's Disease • Workforce and economic development • Safe communities-crime and violence impact
Who/what groups of individuals are most impacted by these problems?	• Residents of Norfolk • Residents of community served by Sentara Leigh Hospital • Patients/clients with a mental health diagnosis • Uninsured and underinsured • Homeless • Aging population • Patients requiring orthopedic procedures

What keeps people from being healthy? In other words, what are the barriers to achieving good health?	• Lack of resources
	• Lack of knowledge, influence or ability
	• Risk for long-term impact
	• Disproportionate distribution of health problems
	• Lack of services for
	  o Mental health
	  o Vulnerable populations
	  o Care coordination/Patient navigation
	  o Chronic disease care
	  o Aging services
	• Long term care

What more can be done to improve health, particularly for those individuals and groups most in need?	• Collaborative work on health problems in Norfolk and surrounding communities • Proactive approaches to preventing chronic diseases • Healthcare policy on national behavioral health crisis

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: Sentara Leigh Ambulatory Surgery Center

Quarter (please indicate): ☐First Quarter ☐Second Quarter ☑Third Quarter ☐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	Strategies that address multiple health problems include: 1. Continue to actively participate in community based organizations to work collaboratively to improve health a. Continue to support local fire and EMS with continuing education through Tidewater EMS and Peninsula EMS b. Participate with Healthy Norfolk, Catholic Churches, Jewish Services, other faith based services and the Union Mission	1. Community Benefit Plan for 2016 includes: 1 YWCA Shelter donation Winter 2 Foodbank of Southeastern VA Food Drive July 3 American Red Cross Blood Drive/ Jay Vergara Quarterly

Health Problem	Three Year Implementation Strategies	Progress
	c. Continue to work with the local health departments and the Senior Services of Southeast Virginia	4 LifeNet Health 2016 National Donate Life Month/ Andrea Bochness April 5 Ingleside Elementary School - Young Entrepreneur Program Host July -Community Health Fair/ Book Fair Stephanie Jackson August 6 United Way Women's Leadership Council Luncheon October 2016
Problem #1 Aging	Strategies to address caring for our aging population include: 1. Collaboration with Sentara Medical Group's Geriatric Clinic on Sentara Leigh Hospital Campus. Opening scheduled for 2014 to include a model focused on patient >55 with multimorbid disease or uncontrolled complex chronic disease, frail elderly, Medicare Advantage and 85+. Collaboration will include integrated management of geriatric patients in an ambulatory setting to improve coordination of care. 2. Seek to expand existing partnerships with Senior Services of Southeast Virginia	1. Partnership with SSSEVA continues and is showing positive outcomes with readmission rates. 2. Purchased Safe Patient Handling Equipment to serve this aging inpt population-Summer
Problem #2 Diabetes	Strategies to address caring for our diabetes population include: 1. Continue to provide diabetes education to community members and work to increase community reach through improved advertising and providing educational classes at different venues	1. Diabetes classes are ongoing; class attendance has increased. 2. Stroke education provided by SLH employees at local churches and events is planned quarterly. Stephanie Jackson participates with YMCA Diabetes Prevention Program Collaborative. Stroke Education included as a part of Ingleside Elementary Young

Health Problem	Three Year Implementation Strategies	Progress
	throughout the community. Current diabetes education classes are advertised through SMG offices (health care coordinators), the newspaper, SLH care coordinators, and the Diabetes Resource Directory printed by VB Business Coalition on Health 2. Partnership with community groups such as the YMCA and local churches to provide access to support classes for diabetes population 3. Explore opportunities to engage with healthy food vendors such as Five Points Farmers Market to support diabetes in food desert areas 4. Seek out opportunities to provide blood sugar and weight screenings at local health fairs	Entrepreneur Program per DNV recommendation to provide education at the elementary school level. 3. Continue to participate in Norfolk Healthcare Collaborative on Obesity/Physical Activity. 4. Multiple education booths at Ingleside Community Health Fair.
Problem #3 Healthcare for the under and uninsured	Strategies to address caring for our under/uninsured population include: 1. Continue to maintain local partnerships with Every Woman's Life, Beach Health Clinic and Planned Parenthood to provide mammography services while working to expand our reach throughout the community a. Sentara Leigh Hospital will explore opportunities to partner with additional area health clinics, churches and community groups 2. Continue to host an annual community health fair a. Future health fairs will include partnership with local medical schools to provide additional screenings, educational and follow up resources 3. Develop mechanisms to increase volunteerisms of Sentara Leigh Hospital staff including physicians at	1. Mammography f/u wait times one of the CPI goals for 2016; improvement noted this year 2. Community Health Fair planning for Spring 2017 @ SLH campus 3. Continue to partner with Free Foundation to assist qualified patients with durable medical equipment as well as provide underinsured patients with durable medical equipment from the Sentara Cost Share agreement. http://www.free-foundation.org/south-hampton-roads

Health Problem	Three Year Implementation Strategies	Progress
	local free clinics such as Virginia Beach Free Clinic and ACC Norfolk	
Problem #4 Adult Obesity	Strategies to address adult obesity include: 1. Continue emphasis on employee health a. Healthy eating suggestions in vending machines on campus b. Creation of employee fitness area in Sentara Leigh Hospital's building project to include space to offer free fitness classes to community members c. Continued support of alternatives to automobile transport to and from work such as biking and riding the Norfolk Tide d. Continued emphasis on the benefits of taking the stairs during the work day 2. Partnership with the Norfolk Healthcare Collaborative on Obesity 3. Healthy menu options for staff, patients and family members in the hospital through collaboration with Morrison's 4. Explore opportunities to incorporate hospital events that are open to the community on the Healthy Norfolk Website 5. Engage with Healthy Norfolk to improve access to healthy lifestyles, and increase access to healthy eating	1. All vending machines at marked with Healthy Edge options 2. Patient and Staff menu updates completed in 2014 3. Bike racks available on campus 4. Stephanie Jackson continues to represent SLH on the Norfolk Healthcare Collaborative on Obesity/Physical Activity. Focus for 2016 is physical activity.