Hospital for Extended Recovery

Community Health Needs Assessment

2016

Hospital for Extended Recovery 2016 Community Health Needs Assessment

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I. INTRODUCTION

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

Our assessment includes a review of population characteristics such as age, educational level, and racial and ethnic composition because 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 interviews with key 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: diabetes, heart disease/high blood pressure/stroke, Alzheimer’s Disease, cancer, and mental health conditions (other than depression).

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.

The Hospital for Extended Recovery works with a number of community partners to address health needs. Some examples include the American Cancer Society, the American Heart and Stroke Association and the Jessie Rees Foundation. 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 contact us at (757) 388-1700 to share your thoughts. Thanks!

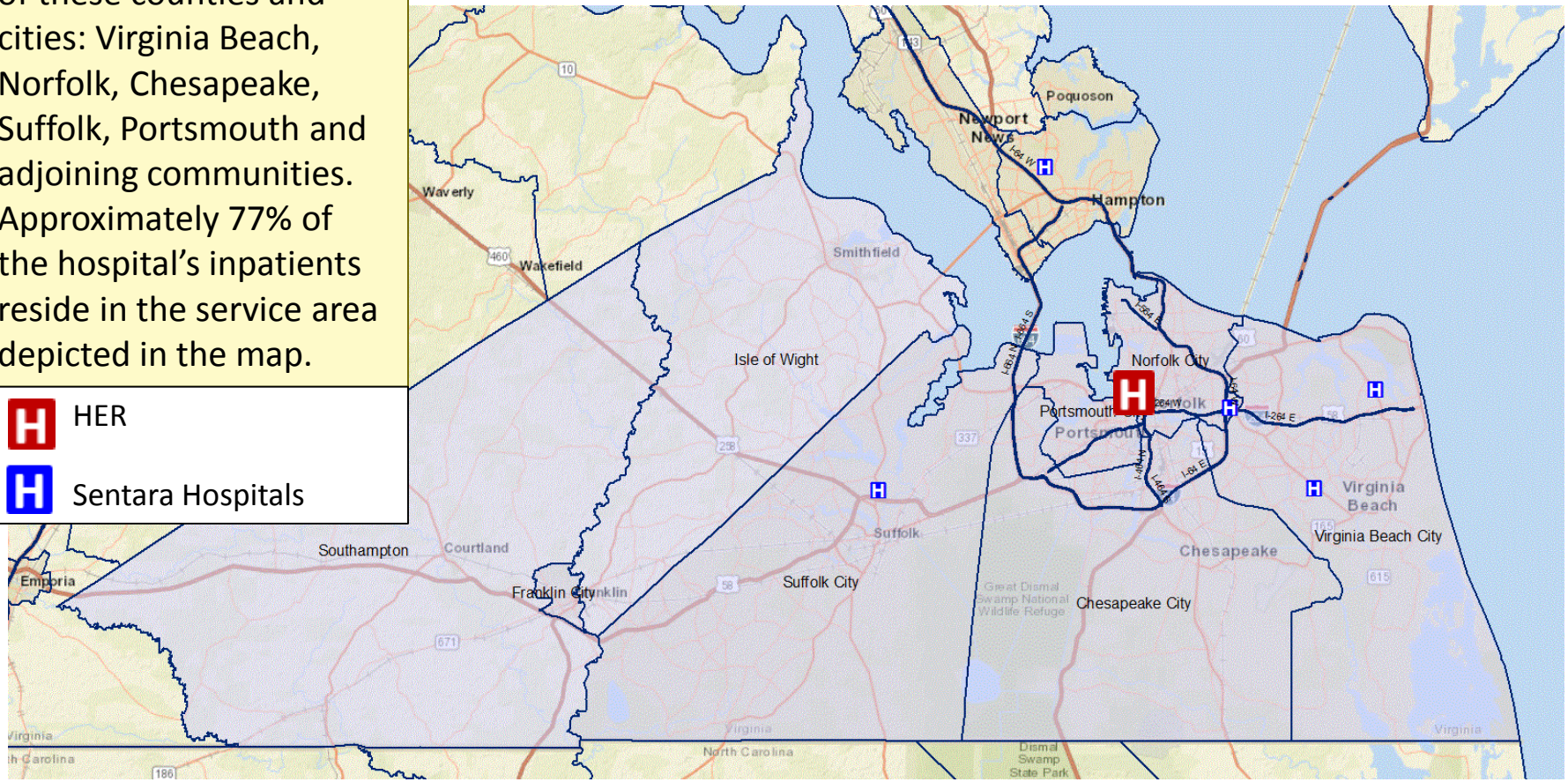
Hospital for Extended Recovery
2016
Community Health Needs Assessment

Community Description

Community Description

The Hospital for Extended Recovery (HER) primarily serves residents of these counties and cities: Virginia Beach, Norfolk, Chesapeake, Suffolk, Portsmouth and adjoining communities. Approximately 77% of the hospital's inpatients reside in the service area depicted in the map.

Hospital for Extended Recovery Service Area



Source: Truven/Market Expert

Area-wide Key Demographic Characteristics

DEMOGRAPHIC CHARACTERISTICS	Selected Area	Virginia	USA
2010 Total Population	1,145,164	8,001,038	308,745,538
2016 Total Population	1,187,933	8,428,339	322,431,073
2021 Total Population	1,231,798	8,801,874	334,341,965
% Change 2016 - 2021	3.7%	4.4%	3.7%
Median Household Income	$ 60,498	$ 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	227,050	19.1%	232,390	18.9%	18.5%	19.0%
15-17	44,694	3.8%	47,100	3.8%	3.8%	4.0%
18-24	132,154	11.1%	127,517	10.4%	10.0%	9.8%
25-34	184,027	15.5%	179,991	14.6%	13.6%	13.3%
35-54	305,032	25.7%	309,266	25.1%	26.8%	26.0%
55-64	144,295	12.1%	154,583	12.5%	12.9%	12.8%
65+	150,681	12.7%	180,951	14.7%	14.4%	15.1%
Total	**1,187,933**	**100.0%**	**1,231,798**	**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	21,661	2.8%	4.8%	5.8%
Some High School	54,101	6.9%	7.0%	7.8%
High School Degree	201,239	25.7%	25.0%	27.9%
Some College/Assoc. Degree	279,216	35.6%	27.3%	29.2%
Bachelor's Degree or Greater	227,818	29.1%	35.8%	29.4%
Total	**784,035**	**100.0%**	**100.0%**	**100.0%**

- **The area's 2016 total population is 1,187,933 with projected growth of 3.7% over the next five years.**
  - This rate of growth is lower than Virginia (4.4%) and equal to the U.S rate.
- **The median household income ($60,498**) is lower than the state, but higher than the US median income.
- **Population by age group:**
  - 15.5% of this population is age 25-34, which is a greater percent compared to Virginia (13.6%) and the U.S (13.3%).
  - The 65+ age cohort (12.7%) is a lower percent compared to Virginia (14.4%) and the U.S (15.1%).
- **9.7% of the population age 25+ has only some high school education or less.**
  - This is a lower percent 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 0.8%,** which is lower than the state (1.3%) and the U.S. (1.5%).
- **18.6% of the population has a household income below $25,000.**
  - This is slightly higher than Virginia with 17.9%, but lower than the U.S. with 22.7%.
  - 200% of the current Federal Poverty Level for a family of four is $48,600.
- **30.4% of the population is Black Non-Hispanic and 54.8% White Non-Hispanic.**
  - The percent Black non-Hispanic population is larger than that of Virginia (18.9%) and the U.S. (12.3%).

DEMOGRAPHIC CHARACTERISTICS

	2016	2021	% Change	Virginia % Change	USA % Change
Total Male Population	589,103	611,504	3.8%	4.5%	3.8%
Total Female Population	598,830	620,294	3.6%	4.4%	3.6%
Females, Child Bearing Age (15-44)	244,453	246,451	0.8%	1.3%	1.5%

HOUSEHOLD INCOME DISTRIBUTION

	Income Distribution			
2016 Household Income	HH Count	% of Total	Virginia % of Total	USA % of Total
<$15K	44,754	10.1%	9.6%	12.3%
$15-25K	37,501	8.5%	8.3%	10.4%
$25-50K	103,648	23.4%	20.8%	23.4%
$50-75K	88,600	20.0%	17.6%	17.6%
$75-100K	58,755	13.3%	12.6%	12.0%
Over $100K	109,892	24.8%	31.1%	24.3%
Total	**443,150**	**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	651,393	54.8%	62.5%	61.3%
Black Non-Hispanic	361,311	30.4%	18.9%	12.3%
Hispanic	79,378	6.7%	9.2%	17.8%
Asian & Pacific Is. Non-Hispanic	51,858	4.4%	6.3%	5.4%
All Others	43,993	3.7%	3.1%	3.1%
Total	**1,187,933**	**100.0%**	**100.0%**	**100.0%**

Source: Truven/Market Expert

Key Demographic Data by City and County

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
Chesapeake city	238,208	5.6%	12.5%	25.9%	23.8%	0.1%	39.2%	3.3%
Franklin city	8,522	1.1%	18.2%	9.7%	26.1%	4.2%	33.4%	0.3%
Isle of Wight	36,435	3.5%	18.1%	19.5%	20.2%	-4.9%	32.5%	2.4%
Norfolk city	246,386	2.4%	10.4%	18.9%	21.2%	7.2%	46.1%	-0.8%
Portsmouth city	96,364	2.0%	14.3%	13.2%	24.3%	6.1%	39.1%	0.0%
Southampton	18,177	0.0%	18.5%	12.5%	18.8%	-7.0%	33.5%	0.8%
Suffolk city	89,015	4.5%	13.6%	21.6%	24.6%	0.1%	37.9%	2.3%
Virginia Beach city	455,193	3.8%	12.7%	19.8%	23.0%	2.8%	41.1%	0.3%
Total	1,188,300	3.7%	12.7%	20.1%	22.9%	2.8%	40.8%	0.8%
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%

- The two highest projected growth areas in the HER service region are Chesapeake city (5.6%) and Suffolk city (4.5%); all other areas are expected to grow at a slower pace than Virginia and the U.S. in the next 5 years with the exception of Virginia Beach city.
- For the age 65+ population group, the areas of Chesapeake city and Suffolk city are expected to grow at a faster rate (25.9% and 21.6% respectively) than the rest of the HER service region, Virginia and the U.S.
- The region's pediatric population growth rate for the service region (2.8%) is expected to exceed state and national rates, with Norfolk city expecting 7.2% growth, however 2 areas are projected to have declines.
- The female population of childbearing age (15-44) in Chesapeake city is projected to grow by 3.3%, whereas Norfolk City (with 46.1% of the female population within this age group) is projected to decline by -0.8% over the next 5 years.

Source: Truven/Market Expert

Key Demographic Data by City and County

Area	Race and Ethnicity			Income and Education	
	2016 % of Pop.: Black, Non-Hispanic	2016 % of Pop.: Asian, Non-Hispanic	2016 % of Pop.: Hispanic Ethnicity (Any Race)	% of Households with Income Below $25,000	% of Pop age 25+ that did not Graduate from High School
Chesapeake city	29.1%	3.4%	5.6%	14.7%	8.8%
Franklin city	55.2%	1.0%	2.7%	40.8%	20.1%
Isle of Wight	23.2%	1.1%	2.9%	19.5%	13.8%
Norfolk city	40.5%	3.7%	7.9%	29.2%	13.3%
Portsmouth city	52.3%	1.3%	4.1%	26.6%	16.2%
Southampton	35.6%	0.3%	1.6%	25.0%	21.6%
Suffolk city	42.1%	1.8%	4.2%	14.8%	11.4%
Virginia Beach city	18.7%	6.5%	8.2%	13.2%	5.5%
Total	30.4%	4.2%	6.7%	18.6%	9.7%
Virginia	18.9%	6.3%	9.2%	17.9%	11.8%
United States	12.3%	5.3%	17.8%	22.7%	13.6%

- Compared to the state and U.S., the HER service area overall has a higher percent of the population that is Black, Non-Hispanic; with Franklin city (55.2%) and Portsmouth city (52.3%) as the leading two areas.
- Virginia Beach city has the highest proportion of Asian (Non-Hispanic) and Hispanic population (6.5% and 8.2% respectively), compared to the overall service area.
- Franklin city has the largest percent (40.8%) of households with income levels below $25,000, as compared to the overall service area, Virginia and the U.S.
- Six out of the 8 areas within the HER service area have a higher percent of population age 25 and older that did not graduate from high school, with Franklin city and Southampton county being the two highest.

Source: Truven/Market Expert

Key Demographic Data by ZIP

City/County	ZIP Code	ZIP Common Name	Total Pop 2016	Total Pop 2021	% Change 2016-2021	% 65+ 2016	% 65+ 2021	Pop Density / Sq Mile	% of Households with Income Below $25,000	% of Pop age 25+ that did not Graduate from High School	% of Service Area Pop
Isle of Wight	23314	Carrolton	7,861	8,549	8.8%	16.2%	19.2%	386	10.6%	11.1%	0.7%
Isle of Wight	23315	Carrsville	1,392	1,392	0.0%	17.5%	21.1%	45	18.6%	15.9%	0.1%
Chesapeake city	23320	Greenbrier	57,367	61,952	8.0%	12.4%	14.7%	1696	12.6%	5.2%	4.8%
Chesapeake city	23321	Western Branch	35,861	37,633	4.9%	14.0%	16.5%	1308	14.9%	8.1%	3.0%
Chesapeake city	23322	Fentress	64,555	67,821	5.1%	11.8%	14.9%	343	7.8%	6.0%	5.4%
Chesapeake city	23323	Deep Creek	38,832	41,182	6.1%	11.3%	13.5%	458	14.1%	10.4%	3.3%
Chesapeake city	23324	South Norfolk	23,489	24,259	3.3%	12.8%	14.2%	3137	31.1%	20.5%	2.0%
Chesapeake city	23325	Indian River	18,307	18,804	2.7%	14.5%	16.3%	4303	21.1%	14.5%	1.5%
Isle of Wight	23430	Smithfield	17,907	18,462	3.1%	18.9%	21.6%	167	21.3%	12.5%	1.5%
Suffolk city	23432	Chuckatuck	1,380	1,362	-1.3%	21.5%	24.2%	101	13.3%	9.5%	0.1%
Suffolk city	23433	Crittenden	1,404	1,526	8.7%	24.9%	28.3%	732	15.4%	5.5%	0.1%
Suffolk city	23434	Suffolk Downtown	49,168	50,851	3.4%	14.0%	16.1%	234	18.8%	13.3%	4.1%
Suffolk city	23435	Driver	29,660	31,743	7.0%	10.6%	12.9%	797	8.3%	8.3%	2.5%
Suffolk city	23436	Hobson	1,106	1,213	9.7%	19.5%	24.0%	396	10.0%	5.1%	0.1%
Suffolk city	23437	Holland	4,205	4,192	-0.3%	18.5%	22.1%	41	14.7%	12.5%	0.4%
Suffolk city	23438	Whaleyville	1,850	1,911	3.3%	17.0%	19.7%	46	12.1%	13.6%	0.2%
Virginia Beach city	23451	Oceanfront	43,896	45,890	4.5%	16.7%	18.8%	2092	17.6%	4.0%	3.7%
Virginia Beach city	23452	Little Neck	60,012	61,054	1.7%	13.5%	15.0%	3577	13.2%	7.0%	5.1%
Virginia Beach city	23453	Green Run	37,558	38,999	3.8%	7.7%	9.7%	3942	11.6%	5.1%	3.2%
Virginia Beach city	23454	Hilltop / Oceana	62,589	65,023	3.9%	12.3%	14.2%	2547	15.0%	4.4%	5.3%
Virginia Beach city	23455	Bayside	51,566	53,533	3.8%	15.5%	17.2%	2619	12.8%	5.1%	4.3%
Virginia Beach city	23456	Princess Anne	55,680	58,970	5.9%	10.9%	13.9%	867	6.2%	4.0%	4.7%
Virginia Beach city	23457	Back Bay	4,384	4,581	4.5%	16.7%	19.9%	67	9.9%	8.6%	0.4%
Virginia Beach city	23459	Fort Story	423	463	9.5%	2.6%	1.3%	342	13.3%	0.0%	0.0%
Virginia Beach city	23460	NAS Oceana	868	866	-0.2%	0.0%	0.0%	148	44.4%	0.5%	0.1%
Virginia Beach city	23461	Dam Neck	926	955	3.1%	0.0%	0.1%	530	0.0%	14.8%	0.1%
Virginia Beach city	23462	Witchduck	62,361	64,850	4.0%	11.4%	12.6%	5477	15.2%	7.7%	5.2%
Virginia Beach city	23463	CBN	402	440	9.5%	4.7%	5.5%	1336	23.2%	6.8%	0.0%
Virginia Beach city	23464	Kempsville	74,588	77,095	3.4%	13.4%	15.7%	4354	12.5%	5.9%	6.3%
Isle of Wight	23487	Windsor	6,338	6,371	0.5%	18.6%	21.2%	66	24.6%	18.3%	0.5%

Source: Truven/Market Expert

Key Demographic Data by ZIP

			Total Pop			% 65+					
City/County	ZIP Code	ZIP Common Name	2016	2021	% Change 2016-2021	2016	2021	Pop Density / Sq Mile	% of Households with Income Below $25,000	% of Pop age 25+ that did not Graduate from High School	% of Service Area Pop
Norfolk city	23502	JANAF	20,959	21,576	2.9%	15.2%	17.2%	2301	23.7%	14.9%	1.8%
Norfolk city	23503	Willoughby	31,067	31,783	2.3%	9.9%	12.1%	6354	22.4%	11.5%	2.6%
Norfolk city	23504	Huntersville	24,382	25,094	2.9%	9.8%	11.3%	5397	48.9%	22.4%	2.1%
Norfolk city	23505	Wards Corner	30,142	31,077	3.1%	10.2%	11.6%	3774	28.9%	9.3%	2.5%
Norfolk city	23507	Hague/EVMS	6,117	6,172	0.9%	13.3%	15.5%	7265	26.1%	3.7%	0.5%
Norfolk city	23508	Larchmont	39,359	39,694	0.9%	4.2%	4.9%	9967	31.8%	5.5%	3.3%
Norfolk city	23509	Lafayette	13,071	13,373	2.3%	14.5%	16.6%	4551	25.7%	17.8%	1.1%
Norfolk city	23510	Waterside	7,900	8,459	7.1%	16.1%	18.4%	6172	32.7%	14.3%	0.7%
Norfolk city	23511	Naval Base & Naval A	3,063	3,078	0.5%	0.2%	0.4%	549	13.0%	2.2%	0.3%
Norfolk city	23513	Norview	29,340	29,976	2.2%	10.7%	12.7%	5581	29.4%	18.0%	2.5%
Norfolk city	23517	Ghent	4,815	5,009	4.0%	10.4%	12.2%	5836	28.5%	7.8%	0.4%
Norfolk city	23518	East Ocean View	28,218	28,767	1.9%	13.6%	15.4%	3211	24.6%	14.2%	2.4%
Norfolk city	23523	Berkley	7,970	8,199	2.9%	10.1%	11.4%	2891	42.7%	20.4%	0.7%
Portsmouth city	23701	Olive	25,031	25,318	1.1%	18.4%	19.8%	3032	21.0%	16.6%	2.1%
Portsmouth city	23702	Cradock	11,284	11,408	1.1%	9.5%	11.3%	3567	31.9%	20.6%	0.9%
Portsmouth city	23703	Churchland	26,287	27,081	3.0%	13.6%	15.4%	1745	16.4%	9.5%	2.2%
Portsmouth city	23704	Downtown	19,027	19,405	2.0%	14.0%	15.5%	3790	40.8%	22.9%	1.6%
Portsmouth city	23707	Midcity	14,460	14,795	2.3%	12.9%	14.5%	3100	31.6%	16.0%	1.2%
Southampton	23827	Boykins	1,375	1,336	-2.8%	20.7%	22.5%	27	38.3%	32.6%	0.1%
Southampton	23828	Branchville	338	327	-3.3%	20.7%	22.6%	9	40.0%	34.5%	0.0%
Southampton	23829	Capron	2,590	2,613	0.9%	14.9%	15.9%	36	26.2%	35.2%	0.2%
Southampton	23837	Courtland	4,143	4,149	0.1%	20.2%	22.6%	38	23.6%	16.8%	0.3%
Southampton	23844	Drewryville	611	594	-2.8%	19.5%	21.5%	14	42.5%	31.0%	0.1%
Franklin city	23851	Franklin	13,818	13,887	0.5%	18.2%	20.1%	119	34.3%	18.9%	1.2%
Southampton	23866	Ivor	2,316	2,357	1.8%	18.6%	21.9%	25	18.3%	16.1%	0.2%
Southampton	23874	Newsoms	1,001	990	-1.1%	18.2%	20.7%	23	26.3%	18.1%	0.1%
Southampton	23878	Sedley	1,180	1,193	1.1%	18.1%	19.9%	28	19.3%	16.2%	0.1%
Isle of Wight	23898	Zuni	2,134	2,146	0.6%	16.9%	19.9%	50	19.0%	17.5%	0.2%
Total HER Service Area			1,187,933	1,231,798	3.7%	12.7%	14.7%	590	18.6%	9.7%	
Virginia			8,428,339	8,801,874	4.4%	14.4%	16.6%	213.8	17.9%	11.8%	
USA			322,431,073	334,341,965	3.7%	15.1%	17.1%	91.4	22.7%	13.6%	

Source: Truven/Market Expert

Race & Ethnicity by ZIP

City/County	ZIP Code	ZIP Common Name	2015	2020	% White NonHisp	% Black NonHisp	% Hispanic	% Asian NonHisp	% Other NonHisp
Isle of Wight	23314	Carrolton	7,861	8,549	70.7%	20.0%	3.8%	1.9%	3.7%
Isle of Wight	23315	Carrsville	1,392	1,392	78.5%	17.4%	1.6%	0.7%	1.8%
Chesapeake city	23320	Greenbrier	57,367	61,952	53.8%	29.5%	6.7%	5.9%	4.1%
Chesapeake city	23321	Western Branch	35,861	37,633	56.2%	32.7%	3.9%	3.4%	3.8%
Chesapeake city	23322	Fentress	64,555	67,821	79.9%	10.3%	4.0%	2.8%	3.0%
Chesapeake city	23323	Deep Creek	38,832	41,182	52.3%	34.4%	6.4%	2.8%	4.1%
Chesapeake city	23324	South Norfolk	23,489	24,259	31.3%	55.9%	8.9%	1.0%	2.9%
Chesapeake city	23325	Indian River	18,307	18,804	47.1%	41.7%	5.7%	2.0%	3.5%
Isle of Wight	23430	Smithfield	17,907	18,462	67.4%	26.5%	2.8%	1.0%	2.3%
Suffolk city	23432	Chuckatuck	1,380	1,362	56.4%	38.7%	2.0%	0.9%	2.0%
Suffolk city	23433	Crittenden	1,404	1,526	87.2%	6.7%	3.0%	1.4%	1.7%
Suffolk city	23434	Suffolk Downtown	49,168	50,851	43.4%	49.9%	3.5%	0.9%	2.3%
Suffolk city	23435	Driver	29,660	31,743	51.0%	36.2%	5.9%	3.5%	3.4%
Suffolk city	23436	Hobson	1,106	1,213	80.8%	11.8%	3.5%	2.3%	1.6%
Suffolk city	23437	Holland	4,205	4,192	71.6%	23.7%	1.9%	0.5%	2.3%
Suffolk city	23438	Whaleyville	1,850	1,911	78.4%	16.9%	1.9%	0.5%	2.4%
Virginia Beach city	23451	Oceanfront	43,896	45,890	77.8%	9.3%	7.6%	2.0%	3.4%
Virginia Beach city	23452	Little Neck	60,012	61,054	62.9%	18.5%	9.4%	4.6%	4.7%
Virginia Beach city	23453	Green Run	37,558	38,999	45.7%	27.1%	10.7%	11.2%	5.4%
Virginia Beach city	23454	Hilltop / Oceana	62,589	65,023	73.1%	11.2%	7.9%	3.7%	4.2%
Virginia Beach city	23455	Bayside	51,566	53,533	68.3%	14.7%	7.7%	5.4%	3.8%
Virginia Beach city	23456	Princess Anne	55,680	58,970	64.7%	15.1%	7.0%	8.9%	4.3%
Virginia Beach city	23457	Back Bay	4,384	4,581	89.6%	4.2%	3.0%	1.2%	2.0%
Virginia Beach city	23459	Fort Story	423	463	56.0%	17.5%	19.1%	0.5%	6.9%
Virginia Beach city	23460	NAS Oceana	868	866	49.4%	37.1%	7.3%	3.8%	2.4%
Virginia Beach city	23461	Dam Neck	926	955	48.2%	38.3%	6.4%	4.5%	2.6%
Virginia Beach city	23462	Witchduck	62,361	64,850	50.1%	29.8%	9.3%	5.8%	5.0%
Virginia Beach city	23463	CBN	402	440	55.2%	26.6%	7.2%	5.0%	6.0%
Virginia Beach city	23464	Kempsville	74,588	77,095	54.5%	22.8%	7.2%	10.9%	4.5%
Isle of Wight	23487	Windsor	6,338	6,371	75.2%	19.4%	2.7%	0.7%	2.0%

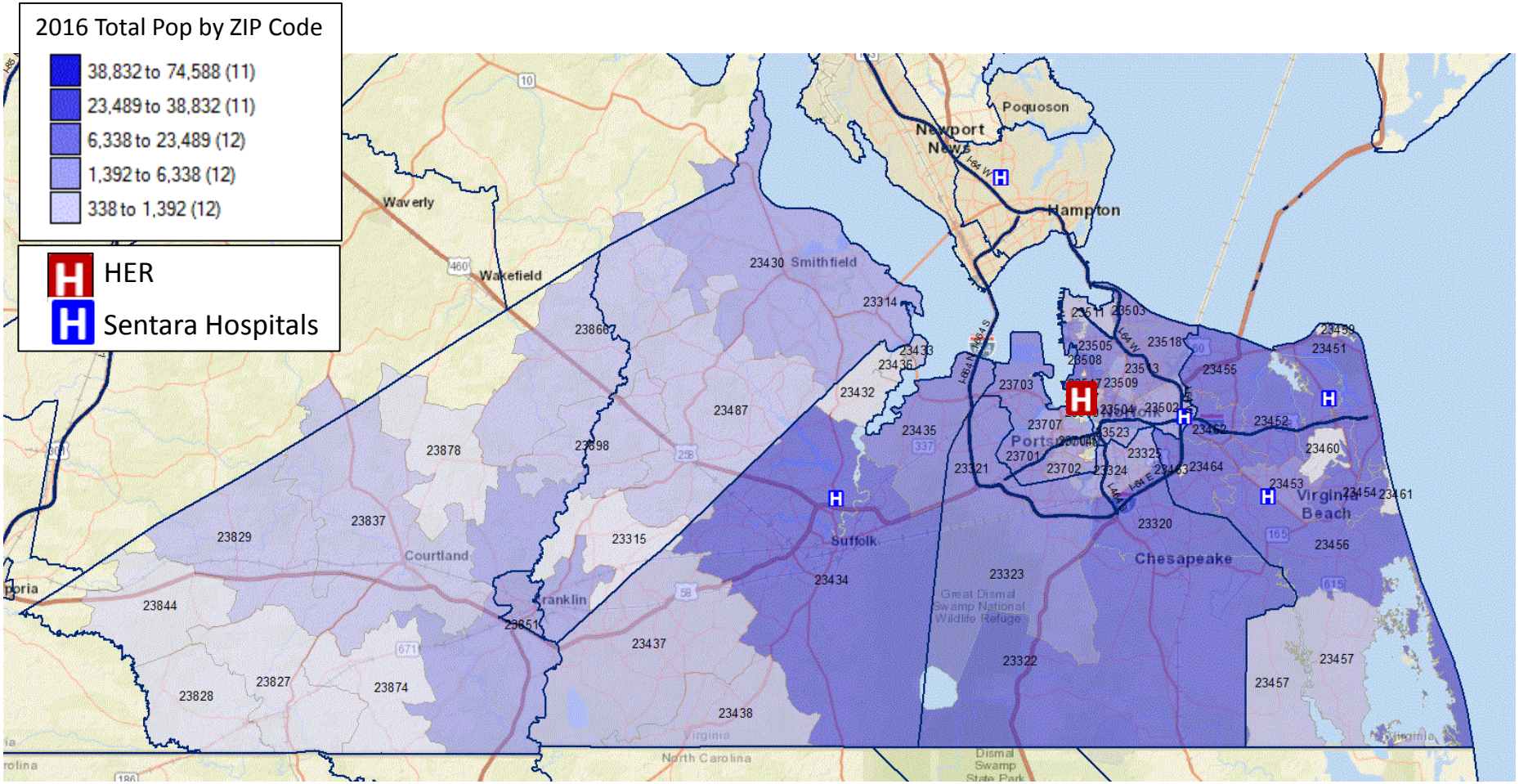
Source: Truven/Market Expert

Race & Ethnicity by ZIP

			Total Pop						
City/County	ZIP Code	ZIP Common Name	2015	2020	% White NonHisp	% Black NonHisp	% Hispanic	% Asian NonHisp	% Other NonHisp
Norfolk city	23502	JANAF	20,959	21,576	35.6%	49.4%	7.1%	4.3%	3.6%
Norfolk city	23503	Willoughby	31,067	31,783	62.8%	20.8%	8.9%	2.7%	4.8%
Norfolk city	23504	Huntersville	24,382	25,094	8.7%	84.3%	3.5%	0.6%	2.9%
Norfolk city	23505	Wards Corner	30,142	31,077	50.7%	31.5%	9.4%	4.1%	4.3%
Norfolk city	23507	Hague/EVMS	6,117	6,172	81.6%	7.3%	3.8%	4.4%	2.9%
Norfolk city	23508	Larchmont	39,359	39,694	51.2%	29.0%	10.4%	5.0%	4.4%
Norfolk city	23509	Lafayette	13,071	13,373	40.8%	47.4%	6.6%	1.6%	3.6%
Norfolk city	23510	Waterside	7,900	8,459	46.8%	46.3%	2.1%	2.8%	2.0%
Norfolk city	23511	Naval Base & Naval A	3,063	3,078	62.5%	16.7%	12.2%	2.2%	6.5%
Norfolk city	23513	Norview	29,340	29,976	26.6%	55.0%	8.7%	5.1%	4.6%
Norfolk city	23517	Ghent	4,815	5,009	65.7%	23.5%	4.1%	3.6%	3.1%
Norfolk city	23518	East Ocean View	28,218	28,767	58.9%	22.1%	9.4%	5.3%	4.4%
Norfolk city	23523	Berkley	7,970	8,199	4.1%	90.1%	3.0%	0.4%	2.4%
Portsmouth city	23701	Olive	25,031	25,318	41.9%	49.8%	4.4%	1.1%	2.8%
Portsmouth city	23702	Cradock	11,284	11,408	38.3%	50.8%	5.0%	1.5%	4.4%
Portsmouth city	23703	Churchland	26,287	27,081	43.6%	46.4%	4.2%	1.9%	3.9%
Portsmouth city	23704	Downtown	19,027	19,405	22.2%	71.2%	3.3%	0.7%	2.7%
Portsmouth city	23707	Midcity	14,460	14,795	48.2%	43.4%	3.8%	1.3%	3.2%
Southampton	23827	Boykins	1,375	1,336	48.1%	48.3%	2.2%	0.2%	1.2%
Southampton	23828	Branchville	338	327	46.4%	50.0%	2.1%	0.0%	1.5%
Southampton	23829	Capron	2,590	2,613	48.8%	48.1%	1.4%	0.2%	1.5%
Southampton	23837	Courtland	4,143	4,149	65.3%	31.4%	1.3%	0.3%	1.7%
Southampton	23844	Drewryville	611	594	45.5%	48.6%	2.1%	0.0%	3.8%
Franklin city	23851	Franklin	13,818	13,887	45.5%	48.7%	2.4%	0.8%	2.6%
Southampton	23866	Ivor	2,316	2,357	74.1%	20.9%	1.8%	0.7%	2.5%
Southampton	23874	Newsoms	1,001	990	56.7%	40.3%	1.9%	0.2%	0.9%
Southampton	23878	Sedley	1,180	1,193	74.4%	22.1%	1.2%	0.6%	1.7%
Isle of Wight	23898	Zuni	2,134	2,146	80.2%	15.0%	1.5%	0.7%	2.6%
Total HER Service Area			1,187,933	1,231,798	54.8%	30.4%	6.7%	4.2%	3.8%

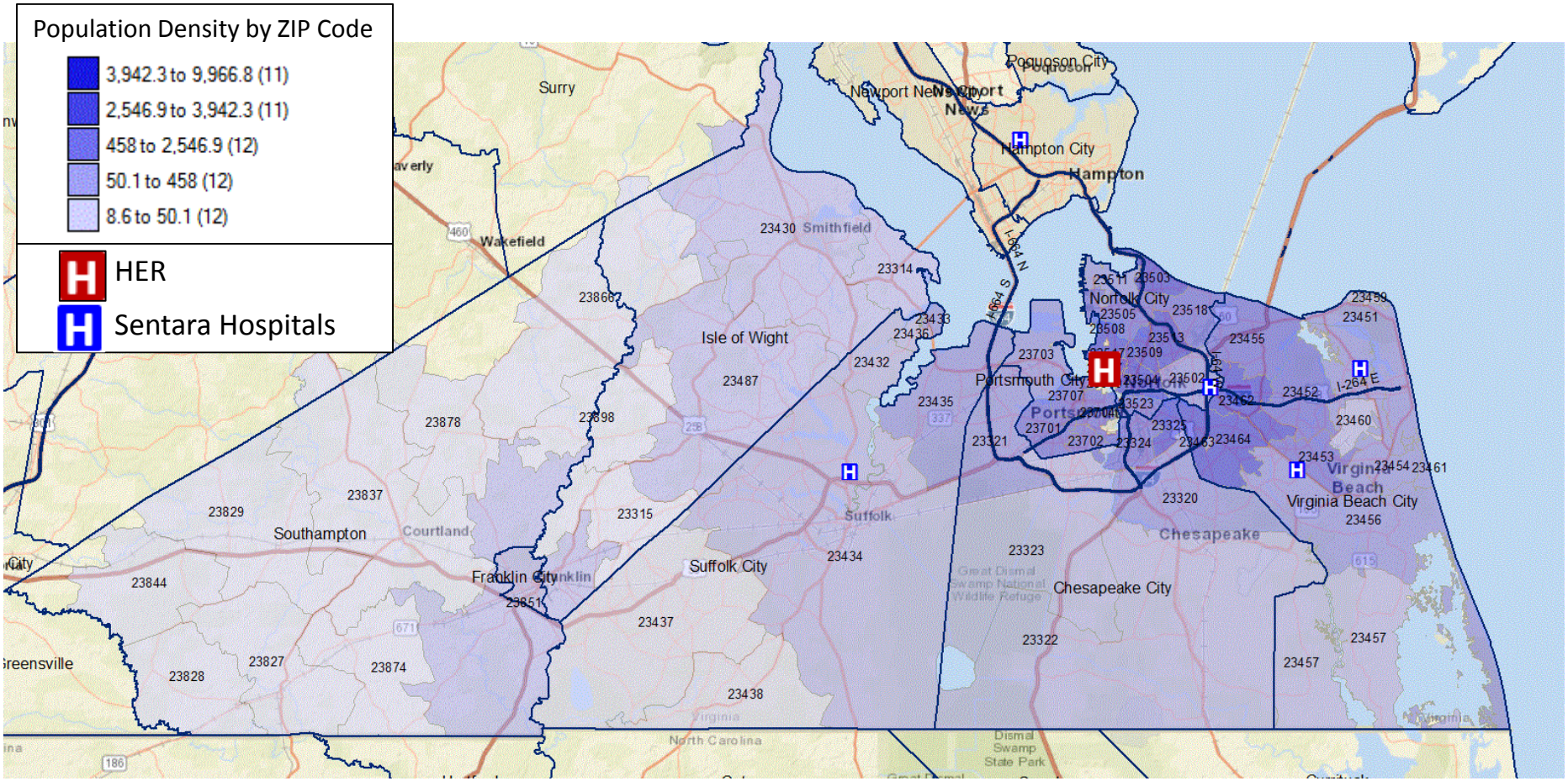
Source: Truven/Market Expert

2016 Total Population by ZIP Code



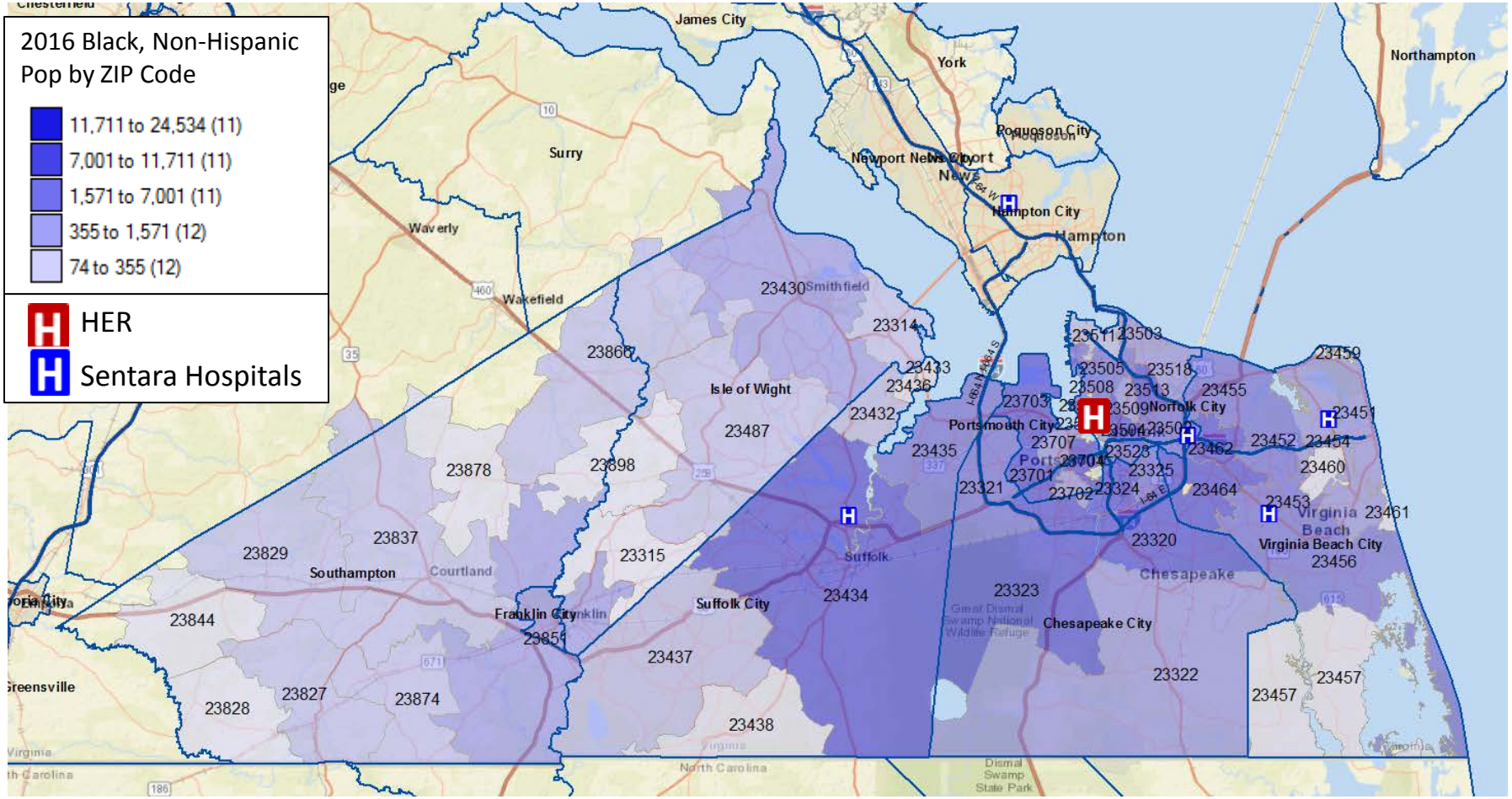
Source: Truven/Market Expert

2016 Population Density by ZIP Code



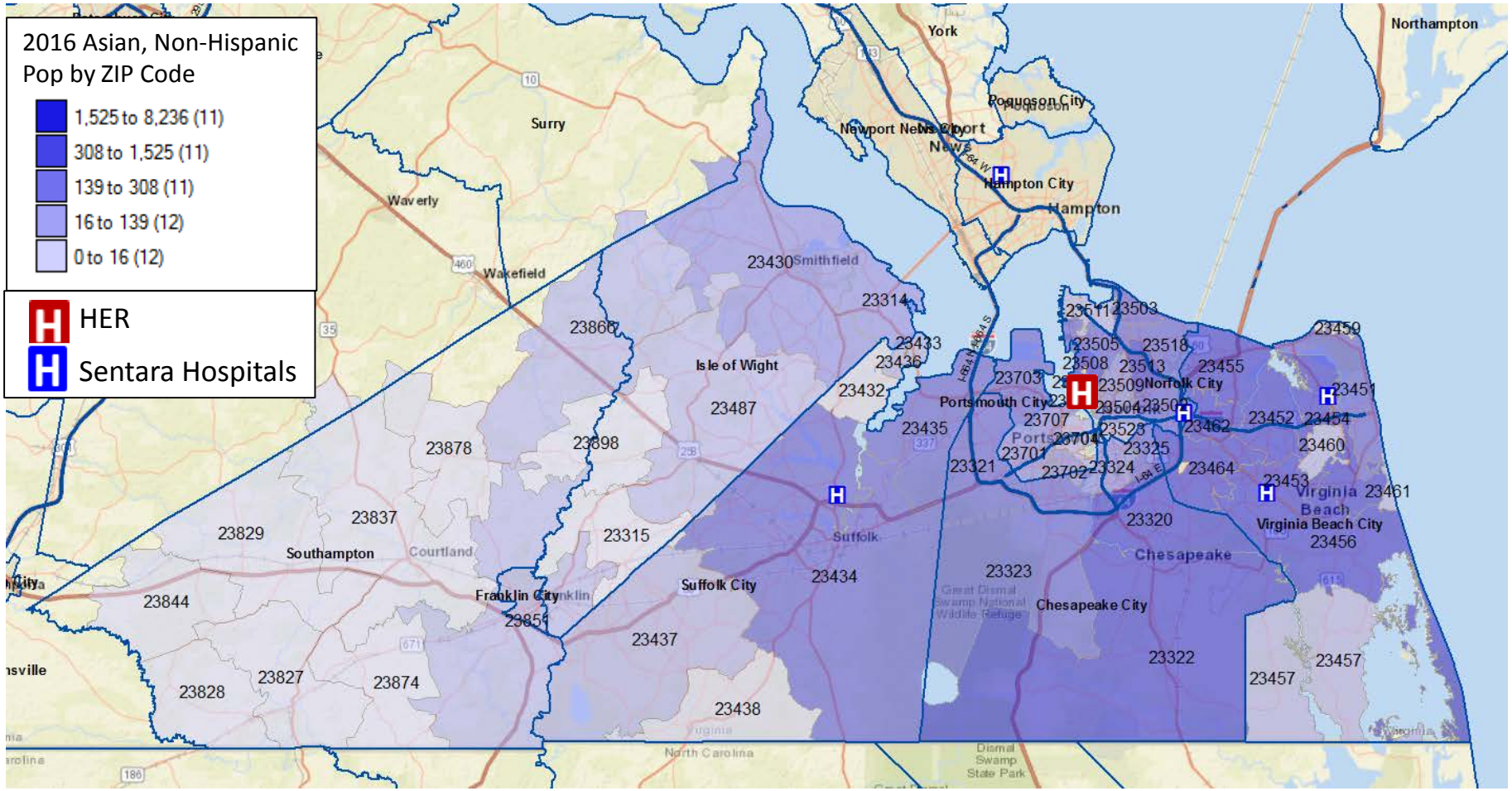
Source: Truven/Market Expert

2016 Black, Non-Hispanic Population by ZIP Code



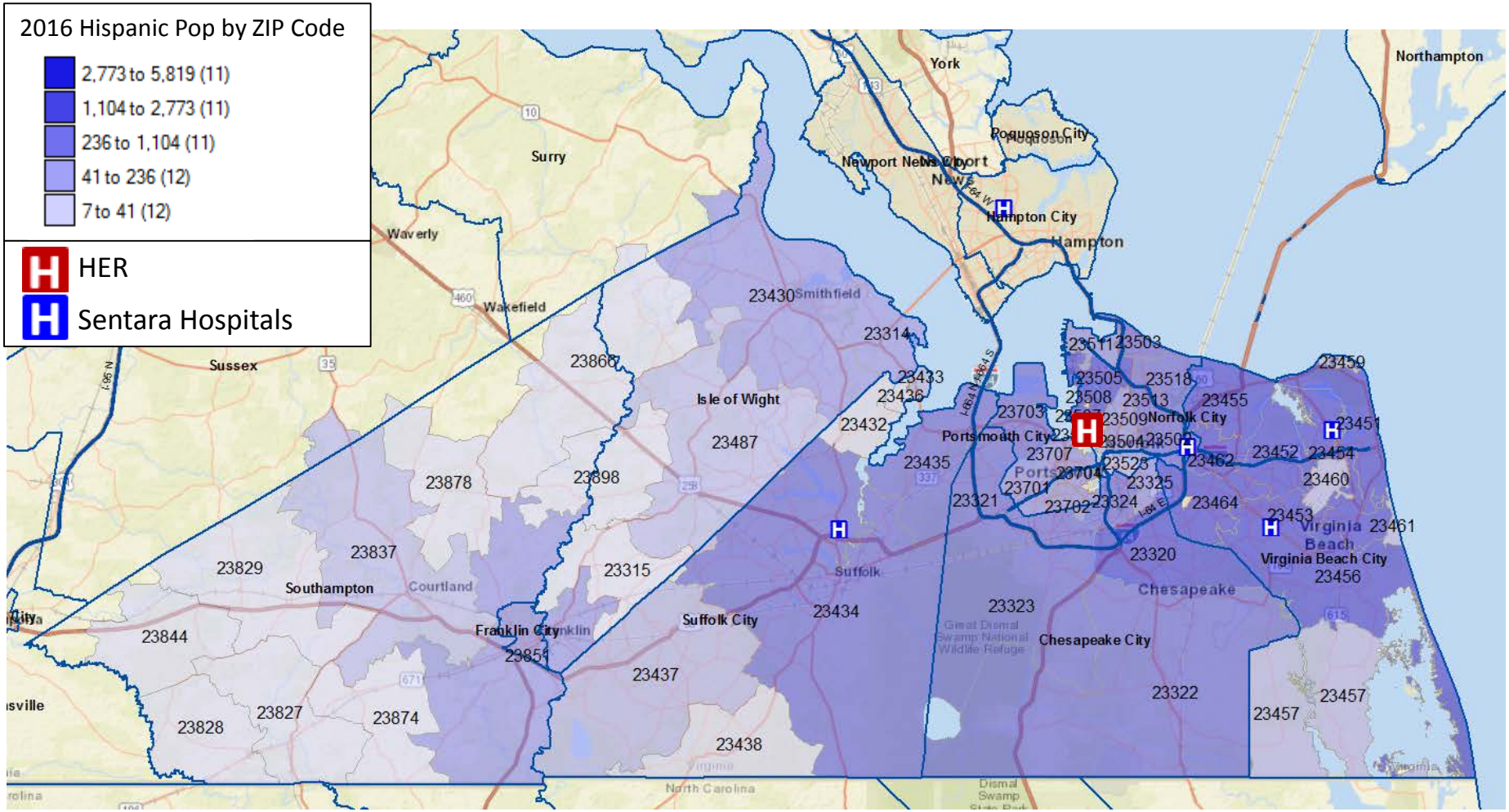
Source: Truven/Market Expert

2016 Asian, Non-Hispanic Population by ZIP Code



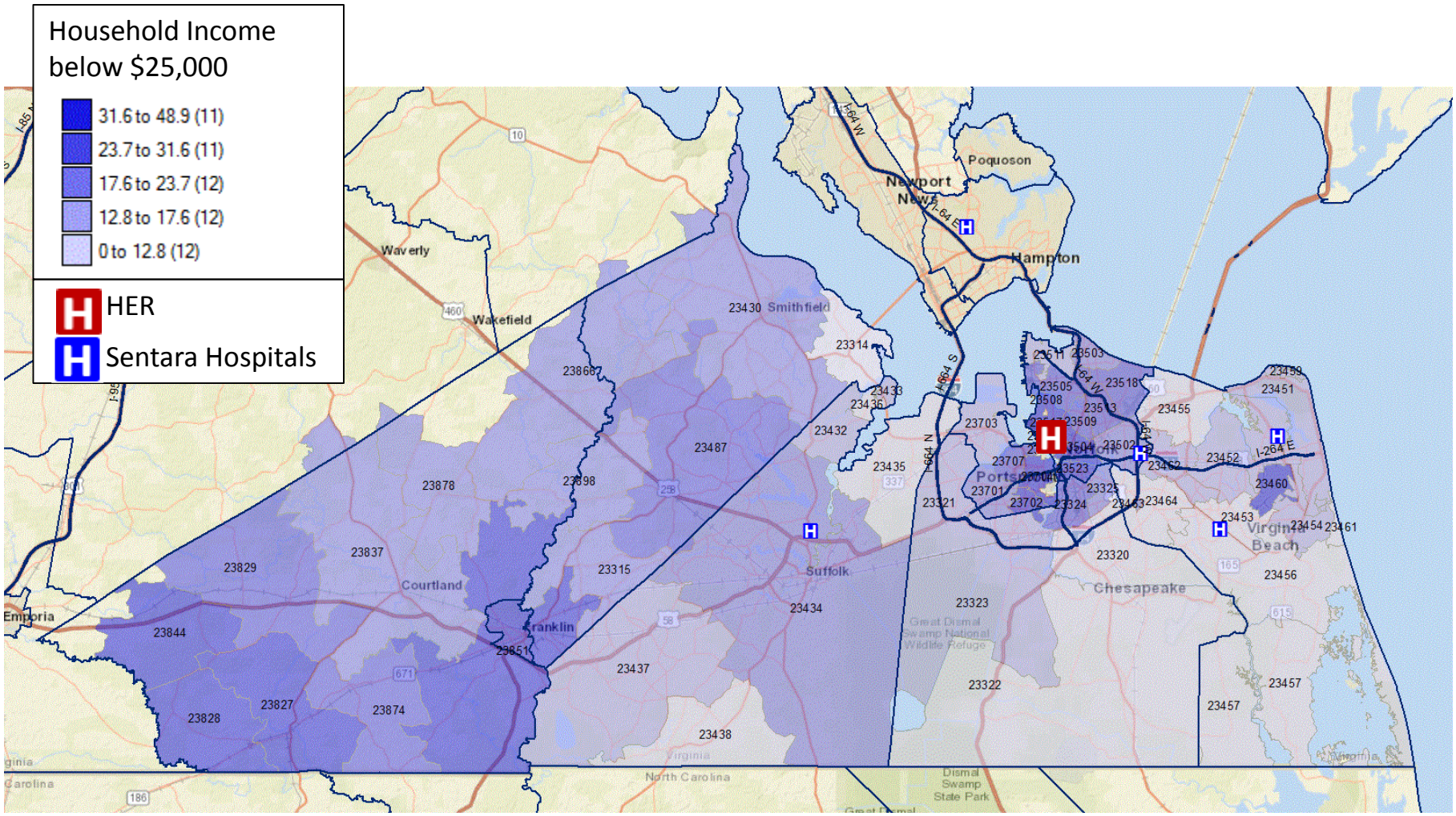
Source: Truven/Market Expert

2016 Hispanic Population by ZIP Code



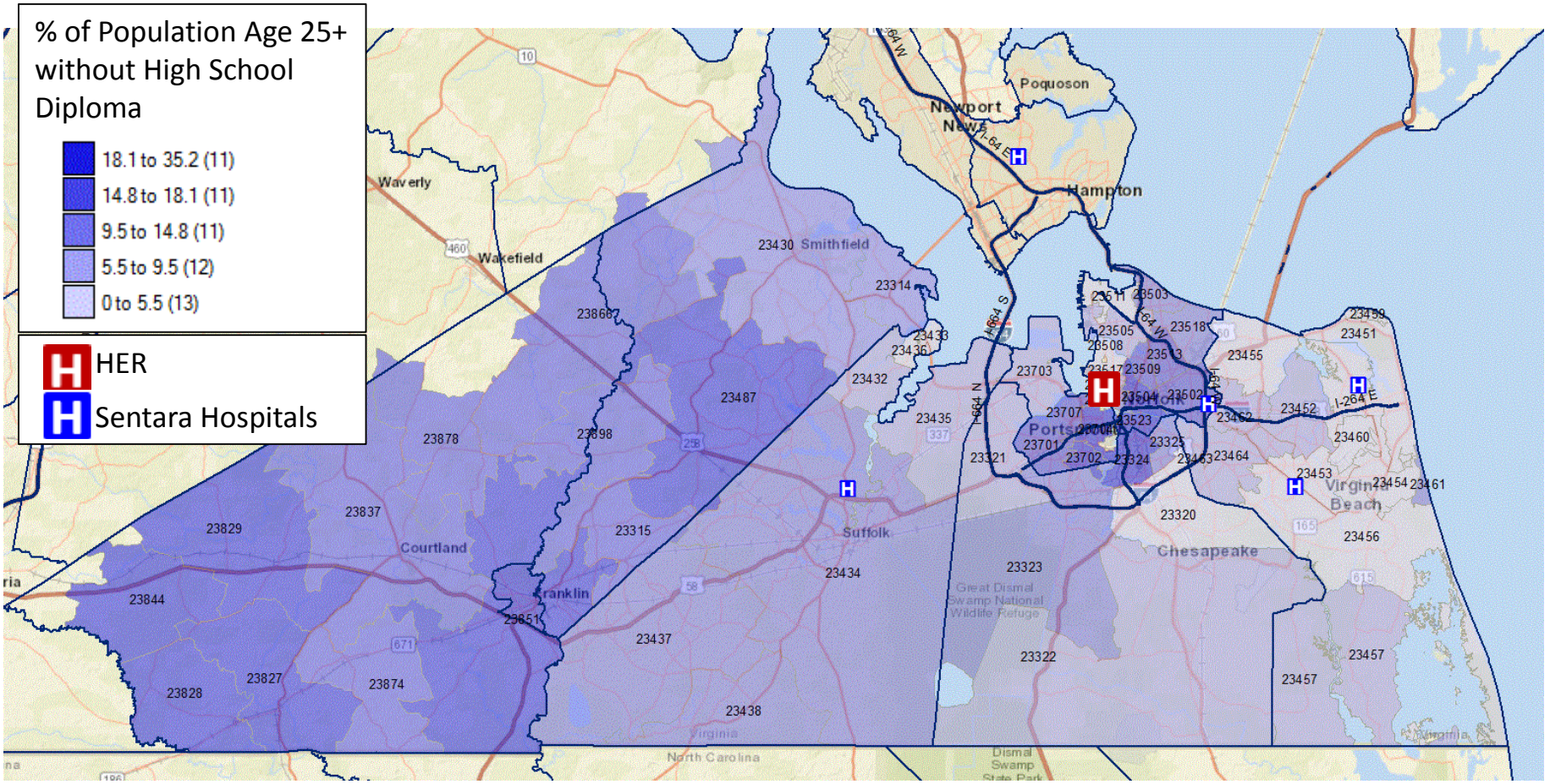
Source: Truven/Market Expert

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 HER Area

ZIP	ZIP Common Name	ZIP	ZIP Common Name
23314	Carrolton	23487	Windsor
23315	Carrsville	23502	JANAF
23320	Greenbrier	23503	Willoughby
23321	Western Branch	23504	Huntersville
23322	Fentress	23505	Wards Corner
23323	Deep Creek	23507	Hague/EVMS
23324	South Norfolk	23508	Larchmont
23325	Indian River	23509	Lafayette
23430	Smithfield	23510	Waterside
23432	Chuckatuck	23511	Naval Base & Naval A
23433	Crittenden	23513	Norview
23434	Suffolk Downtown	23517	Ghent
23435	Driver	23518	East Ocean View
23436	Hobson	23523	Berkley
23437	Holland	23701	Olive
23438	Whaleyville	23702	Cradock
23451	Oceanfront	23703	Churchland
23452	Little Neck	23704	Downtown
23453	Green Run	23707	Midcity
23454	Hilltop / Oceana	23827	Boykins
23455	Bayside	23828	Branchville
23456	Princess Anne	23829	Capron
23457	Back Bay	23837	Courtland
23459	Fort Story	23844	Drewryville
23460	NAS Oceana	23851	Franklin
23461	Dam Neck	23866	Ivor
23462	Witchduck	23874	Newsoms
23463	CBN	23878	Sedley
23464	Kempsville	23898	Zuni

Health Status Indicators Report

Prepared for Sentara Norfolk General Hospital

By Community Health Solutions

May 2016

This Health Status Indicators Report has been adopted by the Hospital for Extended Recovery (HER) for inclusion within the HER Community Health Needs Assessment. The Hospital for Extended Recovery and Sentara Norfolk General Hospital have the same service area.

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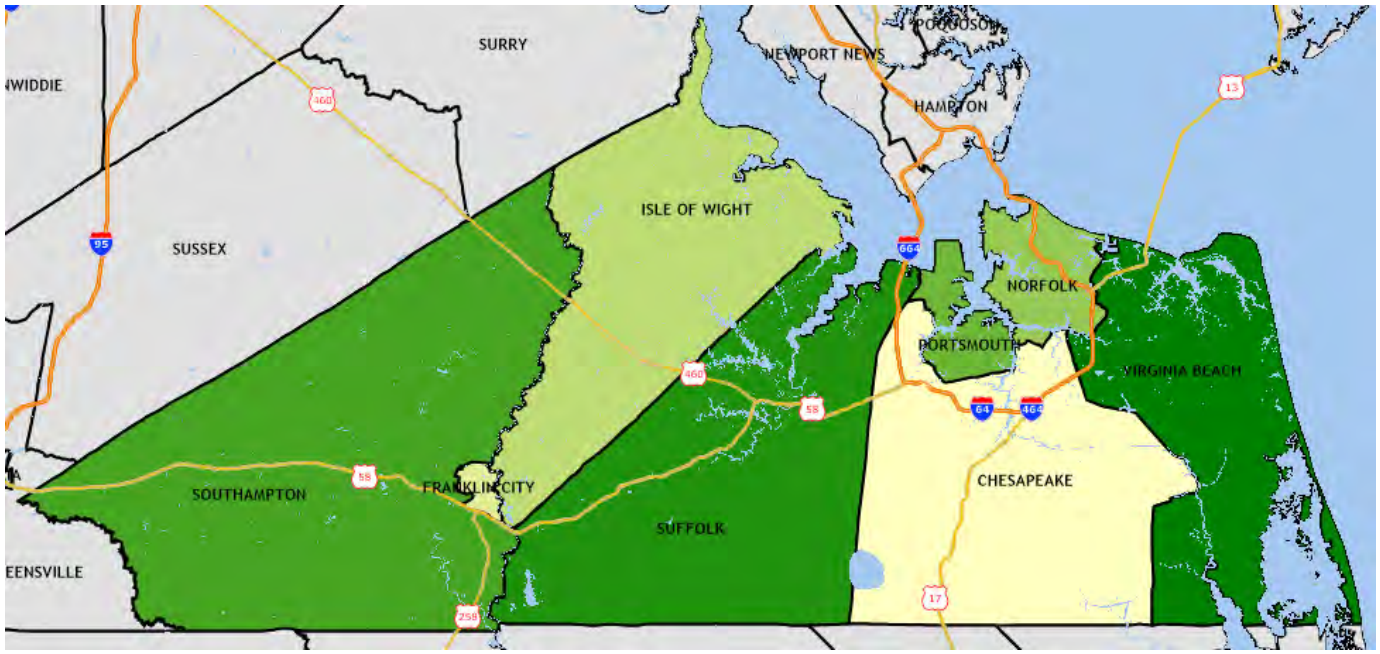
Introduction

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

Study Region



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

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

The profiles are presented in order in the following pages. Following the profiles, *Appendix A* presents a set of Zip Code-Level maps of selected indicators, accompanied by a table of the same 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).

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 8,930 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; Unintentional Injury; Diabetes; and Nephritis and Nephrosis.
- The age-adjusted death rates for the study region were higher (worse) than the state rates for all causes combined, and for 10 of the 14 leading causes of death. Specifically, the death rates for the study region were higher than the state rates for Malignant Neoplasms (cancer), Heart Disease; Chronic Lower Respiratory Disease; Unintentional Injury; Diabetes; Nephritis and Nephrosis; Alzheimer's Disease; Septicemia; Chronic Liver Disease; and Primary Hypertension.

Mortality Trend – All Deaths (2011-2013)

- **Trend by Cause:** As shown in Exhibit 1B, from 2011 to 2013 the age-adjusted death rates in the study region increased for Unintentional Injury, Nephritis and Nephrosis and Septicemia; remained stable for Malignant Neoplasms and Heart Disease; and declined for the other leading causes. This pattern generally reflected the statewide trend except for Unintentional Injury death rates which increased in the study region but declined statewide.
- **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. The study region trend was similar to the statewide trend for the Black/African American and Hispanic Ethnicity populations. However, study region deaths declined for the Asian population where the statewide count increased. Additionally, study region deaths increased for the White population where the statewide counts decreased.
- **Trend by Sex:** As shown in *Exhibit 1D,* from 2011 to 2013 there was a 2% increase in the number of total deaths in the study region for the female population, and a 7% increase for the male population. The study region trend was consistent with the statewide trend.

Premature Death Trend (2011-2013)

- **Definition:** Consistent with conventions in the field, premature mortality can be defined as deaths that occur before age 75.
- **Leading Causes:** As shown in *Exhibit 1E*, over the 2011 to 2013 time period, roughly 47% of all deaths could be classified as premature deaths. 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 seven of the top 10 causes of premature death. Specifically, study region premature deaths increased for Malignant Neoplasms, Heart Disease, Unintentional Injury, Chronic Lower Respiratory Diseases, Nephritis and Nephrosis, Septicemia, and Chronic Liver Disease.
    - The study region trend was similar to the statewide trend for most causes of premature death. However, the study region counts for Unintentional Injury increased by 16% from 2011 to 2013, compared to a 2% decline for the state overall. Additionally, the study region counts declined by 4% for Cerebrovascular Disease and by 25% for Suicide deaths, compared to a statewide increase or stable trend for these two causes.
- **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 most racial/ethnic groups, with the exception of the Asian population, which declined, and the Black/African American population, which remained relatively stable.
    - The study region trend differed from the statewide trend for all racial/ethnic groups except the White population. For the Asian population, study region deaths declined where the statewide counts increased.
    - For the Black/African American population, study region deaths remained relatively stable where the statewide rate increased slightly.
    - For the Hispanic Ethnicity population, the study region rates increased substantially whereas statewide rates remained stable.
- **Trend by Sex:** As shown in *Exhibit 1G,* from 2011 to 2013 there was a 2% increase in the number of premature deaths in the study region for the female population, and an 8% 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	8,930
Counts-Leading 14 Causes of Death		
Malignant Neoplasms (Cancer) Deaths	14,348	2,061
Heart Disease Deaths	13,543	1,929
Cerebrovascular Disease (Stroke) Deaths	3,278	429
Chronic Lower Respiratory Disease Deaths	3,168	426
Unintentional Injury Deaths	2,794	417
Diabetes Mellitus Deaths	1,618	261
Nephritis and Nephrosis Deaths	1,547	253
Alzheimer's Disease Deaths	1,634	230
Septicemia Deaths	1,464	221
Influenza and Pneumonia Deaths	1,430	156
Suicide Deaths	1,047	132
Chronic Liver Disease Deaths	836	131
Primary Hypertension and Renal Disease Deaths	629	93
Parkinson's Disease Deaths	549	65
Age Adjusted Death Rates per 100,000 Population		
Deaths by All Causes	720.1	793.0
Malignant Neoplasms (Cancer) Deaths	161.3	180.0
Heart Disease Deaths	155.9	171.2
Cerebrovascular Disease (Stroke) Deaths	38.5	38.3
Chronic Lower Respiratory Disease Deaths	37.2	39.5
Unintentional Injury Deaths	33.0	35.9
Diabetes Mellitus Deaths	18.3	22.9
Nephritis and Nephrosis Deaths	18.0	22.8
Alzheimer's Disease Deaths	19.6	21.5
Septicemia Deaths	17.7	18.9
Influenza and Pneumonia Deaths	16.8	14.4
Suicide Deaths	12.2	11.1
Chronic Liver Disease Deaths	8.9	10.5
Primary Hypertension and Renal Disease Deaths	7.2	8.3
Parkinson's Disease Deaths	6.7	6.2
Note: Rates are not calculated where n<30.		
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.		

Exhibit 1B. Mortality Trend (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All Deaths (Leading 10 Causes)					
Total Deaths (All Causes)	8,584	8,614	8,930	6%	4%
Malignant Neoplasms (Cancer)	1,974	1,999	2,061	1%	4%
Heart Disease	1,848	1,878	1,929	3%	4%
Cerebrovascular Disease (Stroke)	441	395	429	-1%	-3%
Chronic Lower Respiratory Disease	440	438	426	2%	-3%
Unintentional Injury	353	344	417	2%	18%
Alzheimer's Disease	293	263	230	-9%	-22%
Diabetes Mellitus	259	251	261	-1%	1%
Nephritis and Nephrosis	220	199	253	9%	15%
Septicemia	191	160	221	7%	16%
Influenza and Pneumonia	170	136	156	2%	-8%
Age Adjusted Death Rates per 100,000 Population					
Total Deaths (All Causes)	798.3	782.4	793.0	-2%	-1%
Malignant Neoplasms (Cancer)	182.1	179.3	180.0	-5%	-1%
Heart Disease	172.7	170.5	171.2	-3%	-1%
Cerebrovascular Disease (Stroke)	41.7	36.0	38.3	-7%	-8%
Chronic Lower Respiratory Disease	42.5	41.3	39.5	-3%	-7%
Unintentional Injury	31.5	30.6	35.9	-1%	14%
Alzheimer's Disease	28.5	25.2	21.5	-15%	-25%
Diabetes Mellitus	24.0	23.2	22.9	-6%	-5%
Nephritis and Nephrosis	20.9	18.0	22.8	-7%	9%
Septicemia	17.9	14.5	18.9	5%	6%
Influenza and Pneumonia	16.0	12.5	14.4	-3%	-10%
Note: Rates are not calculated where n<30.					
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.					

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

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Asian	166	150	162	15%	-2%
Black/African American	2,812	2,790	2,879	4%	2%
White	5,573	5,653	5,802	-11%	4%
Hispanic Ethnicity	92	106	114	8%	24%
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	4,393	4,387	4,465	3%	2%
Male	4,191	4,227	4,465	4%	7%
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)	4,027	4,040	4,247	4%	5%
Malignant Neoplasms (Cancer)	1,150	1,167	1,240	0%	8%
Heart Disease	742	770	787	6%	6%
Unintentional Injury	256	234	297	-2%	16%
Chronic Lower Respiratory Diseases	168	161	174	1%	4%
Cerebrovascular Diseases	163	164	156	5%	-4%
Diabetes Mellitus	135	114	130	-1%	-4%
Nephritis and Nephrosis	83	86	126	16%	52%
Septicemia	86	78	116	21%	35%
Chronic Liver Disease	94	108	109	11%	16%
Suicide	134	135	101	0%	-25%
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 1F. Premature Mortality Trend by Race/Ethnicity (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Asian	93	83	86	3%	-8%
Black/African American	1,646	1,607	1,656	3%	1%
White	2,265	2,337	2,445	2%	8%
Hispanic Ethnicity	58	66	64	0%	10%
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	1,726	1,702	1,765	3%	2%
Male	2,301	2,338	2,482	4%	8%
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.					

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 21,126 total pregnancies and 15,752 live births in the study region. Among the live births were 1,389 low weight births, 2,054 late prenatal care births, 6,179 non-marital births, and 880 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 all maternal and infant health indicators, with the exception of births with late prenatal care, where the rates were comparable.
- Focusing on infant mortality, there were 676 infant deaths for the study region from 2009 to 2013. The rate of infant mortality was above (worse) the state rate for this period.

Maternal and Infant Health Trend (2011-2013)

- **Select Birth and Teenage Pregnancy Indicators**. As shown in *Exhibit 2B*, from 2011 to 2013 within the study region, there was a decrease in the rate of total live births, low weight births, non-marital births, and teenage pregnancies. These trends were comparable to statewide trends with the exception of the low weight birth rate which remained stable for the state as a whole.
- **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 Pregnancies	126,655	21,126
Induced Terminations of Pregnancy	19,724	4,605
Natural Fetal Deaths	4,954	769
Total Live Births	101,977	15,752
Low Weight Births (under 2,500 grams / 5 lb. 8 oz.)	8,178	1,389
Late Prenatal Care (No Prenatal Care in First 13 Weeks)	13,435	2,054
Non-Marital Births	35,289	6,179
Total Teen Pregnancies Ages 10-19	7,447	1,382
Pregnancies- Teens Age 18-19	5,647	1,047
Pregnancies- Teens Age 15-17	1,712	315
Pregnancies-Teens Age <15	88	20
Live Births to Teens Age 10-19	5,316	880
Live Births to Teens Age 18-19	4,073	676
Live Births to Teens Age 15-17	1,208	197
Live Births to Teens Age <15	35	7
Total Infant Deaths 2009-2013	3,402	676
Rates		
Live Birth Rate per 1,000 Population	12.3	13.5
Low Weight Births pct. of Total Live Births	8%	9%
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%	39%
Teenage (age 10-19) Pregnancy Rate per 1,000 Teenage Female Population (age 10-19)	14.4	19.3
Pregnancy Rate- Teens Age 18-19	50.4	70.9
Pregnancy Rate- Teens Age 15-17	11.3	14.7
Pregnancy Rate-Teens Age <15	0.3	0.6
Teenage (age 10-19) Live Birth Rate per 1,000 Teenage Female Population (age 10-19)	10.3	12.3
Teenage (age 18-19) Live Birth Rate per 1,000 Teenage Female Population (age 18-19)	36.4	45.8
Teenage (age 15-17) Live Birth Rate per 1,000 Teenage Female Population (age 15-17)	8.0	9.2
Teenage (age <15) Live Birth Rate per 1,000 Teenage Female Population (age <15)	0.1	0.2
Five-Year Infant Mortality Rate per 1,000 Live Births) 2009-2013	6.6	8.4
Notes: 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 2B. Select Birth and Teenage Pregnancy Indicator Trend (2011-2013)

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total Live Births	16,031	16,064	15,752	-1%	-2%
Low Weight Births	1,455	1,531	1,389	0%	-5%
Non Marital Births	6,538	6,524	6,179	-3%	-5%
Teenage (age 10-19) Pregnancies	1,800	1,630	1,382	-23%	-23%
Rates	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total Live Births (per 1,000 population)	13.9	13.8	13.5	-3%	-3%
Low Weight (as a percent of Total Live Births)	9%	10%	9%	0%	-3%
Non Marital Births (as a percent of Total Live Births)	41%	41%	39%	-1%	-4%
Teenage (age 10-19) Pregnancies (per 1,000 Teenage Female Population)	24.4	22.4	19.3	-23%	-21%
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		1,146	1,065	880	-19%	-23%
Age	18-19	857	796	676	-15%	-21%
	15-17	282	253	197	-29%	-30%
	<15	7	16	7	-39%	--
Note: Rates and/or percent change are not calculated where n<30.						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

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

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Teenage (Age 10-19) Live Births						
Race	Black/African American	688	643	541	-23%	-21%
	White	394	348	256	-26%	-35%
Ethnicity	Hispanic Ethnicity	62	56	59	-5%	-5%
Note: Rates and/or percent change are not calculated where n<30. Births with Other/Unknown race were not included in the analysis. Hispanic is classification of ethnicity; therefore, Hispanic individuals are also included in the race categories.						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

3. Preventable Hospitalization Profile

This profile presents indicators of preventable hospitalizations based on 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 11,285 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. Diabetes ranks higher in the study region than for the state as a whole.
- The age-adjusted PQI diagnoses rates for the study region were higher (worse) than the Virginia rates for the PQIs overall, and for COPD or Asthma in Older Adults (age 40+), Diabetes, 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 age-adjusted PQI discharge rates per 100,000 population declined for the total PQIs, and for all specific diagnoses. The study region trend was consistent with the statewide trend for diagnoses except Diabetes, where the statewide rate remained stable.
- **By Age Group**. As shown in *Exhibit 3C*, from 2011 to 2013 the rate of PQI discharges for the study region decreased for all age groups. Age-group rates also declined for Virginia as a whole, although at a faster pace. The study region trend was consistent with the statewide trend. It is important to note the study region counts for the 65+ age group remained relatively stable, whereas the statewide counts decreased substantially.
- **By Race/Ethnicity**. As shown in *Exhibit 3D,* from 2011 to 2013 the rate of PQI discharges for the study region decreased for all racial/ethnic populations. The same downward trend occurred for the state as a whole although at a faster pace for some groups.
- **By Payer.** As shown in *Exhibit 3E*, from 2011 to 2013 the study region counts for Total PQI Discharges declined for the Medicare, Medicaid, and Private Insurance populations. The study region trend was consistent with the statewide trend for the Private Insurance population. Unlike the study region, the statewide counts increased or remained relatively stable for the Medicare and Medicaid populations.

Exhibit 3A. Preventable Hospitalization Snapshot (2013)

Indicator	Virginia	Study Region
Counts		
Total PQI Discharges *(see note)*	76,860	11,285
Congestive Heart Failure	18,239	3,129
COPD or Asthma in Older Adults (age 40+)	16,026	2,203
Diabetes	9,938	1,673
Bacterial Pneumonia	11,867	1,525
Urinary Tract Infection	8,452	1,008
Dehydration	7,743	996
Hypertension	2,768	435
Perforated Appendix	1,189	160
Angina	941	98
Asthma in Younger Adults (age 18-39)	444	153
Age Adjusted Rates per 100,000 Population		
Total PQI Discharges *(see note)*	897.9	988.1
Congestive Heart Failure	209.1	188.7
COPD or Asthma in Older Adults (age 40+)	176.3	278.2
Diabetes	114.5	140.3
Bacterial Pneumonia	136.4	135.3
Urinary Tract Infection	100.1	92.0
Dehydration	89.5	88.9
Hypertension	31.7	37.5
Perforated Appendix	13.7	13.3
Angina	12.0	8.5
Asthma in Younger Adults (age 18-39)	5.0	13.1

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

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

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

Indicator	Study Region			% Change (2011-2013)	
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Total PQI Discharges*(see note)*	11,551	10,997	11,285	-6%	-2%
Congestive Heart Failure	3,008	2,934	3,129	-8%	4%
Bacterial Pneumonia	1,744	1,686	1,525	-29%	-13%
COPD or Asthma in Older Adults (age 40+)	2,264	2,089	2,203	-20%	-3%
Diabetes	1,660	1,462	1,673	-2%	1%
Urinary Tract Infection	1,163	1,082	1,008	-22%	-13%
Age Adjusted Rates per 100,000 Population					
Total PQI Discharges*(see note)*	1,062.8	977.2	988.1	-11%	-7%
Congestive Heart Failure	282.8	264.5	278.2	-13%	-2%
Bacterial Pneumonia	163.7	152.1	135.3	-32%	-17%
COPD or Asthma in Older Adults (age 40+)	204.6	180.2	188.7	-24%	-8%
Diabetes	142.7	123.5	140.3	0%	-2%
Urinary Tract Infection	111.9	100.6	92.0	-25%	-18%

Note: -- Rates and/or percent change 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)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Age	Adults Age 18-29	554	501	482	-23%	-13%
	Adults Age 30-44	991	913	933	-21%	-6%
	Adults Age 45-64	3,688	3,423	3,588	-18%	-3%
	Seniors Age 65+	6,318	6,160	6,282	-20%	-1%
Crude Rates per 100,000 population						
Age	Adults Age 18-29	242.9	221.2	205.4	-24%	-15%
	Adults Age 30-44	435.8	398.8	403.9	-21%	-7%
	Adults Age 45-64	1,245.8	1,127.7	1,180.0	-19%	-5%
	Seniors Age 65+	5,078.0	4,669.7	4,830.4	-23%	-5%
Note: -- Rates and/or percent change are not calculated where n<30.						
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.						

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

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Race	Asian	186	159	136	-11%	-27%
	Black/African American	4,793	4,563	4,506	-16%	-6%
	White	6,160	5,767	5,781	-22%	-6%
Ethnicity	Hispanic Ethnicity	121	114	121	-30%	0%
Crude Rates per 100,000 population						
Race	Asian	425.4	349.7	291.9	-16%	-31%
	Black/African American	1,304.9	1,233.8	1,224.8	-17%	-6%
	White	910.8	846.7	832.5	-22%	-9%
Ethnicity	Hispanic Ethnicity	180.9	180.6	173.1	-31%	-4%
Note: -- Rates and/or percent change are not calculated where n<30.						
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B.						

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

Indicator		Study Region			% Change (2011-2013)	
Counts (Total PQI)		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
Payer	Medicare	7,253	6,835	7,058	3%	-3%
	Medicaid	1,209	1,120	1,004	1%	-17%
	Private	1,004	1,012	927	-7%	-8%
	Self-Pay/Uninsured	2,085	2,030	2,296	10%	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.

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 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.

Behavioral Health Hospitalization Snapshot (2013)

Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, most of the tables in this Behavioral Health section undercount the number and rate of behavioral health hospitalizations. Please refer to Exhibit 4C, which contains information for other age cohorts.

As shown in *Exhibit 4A*:

- In 2013 there were 8,310 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 lower 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 Schizophrenic Disorders, Alcoholic Psychoses, Drug Psychoses, Symptoms Involving Head or Neck, and Altered Mental Status.

Behavioral Hospitalization Trend (2011-2013)

- **By Leading Diagnoses.** As shown in *Exhibit 4B*, from 2011 to 2013 the study region rates declined for BH discharges overall. Focusing on three diagnoses identified as being of particular interest for this study, hospitalization rates declined for Affective Psychoses and Schizophrenic Disorders, and increased significantly for Alcoholic Psychoses. The study region trend was consistent with the statewide trend for Affective Psychoses and Alcoholic Psychoses. However, unlike the study region, the statewide rate remained relatively stable for BH discharges overall, and 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, with the exception of the 45-64 group. The study region trend was consistent with the statewide trend for the 45-64 and 65+ age groups. However, unlike the study region, the statewide rate increased for the 18-29, and 30-44 age groups.
- **By Sex.** As shown in *Exhibit 4D*, from 2011 to 2013 there was a 14% decrease in the rate of BH discharges in the study region for the female population, and a 6% decrease for the male population. The study region trend differed from statewide trend; unlike the study region, the statewide rate remained relatively stable for females and increased for males.
- **By Race/Ethnicity.** As shown in *Exhibit 4E*, from 2011 to 2013 the study region rates for BH discharges declined for all racial/ethnic populations. The study region trend was consistent with the statewide decline for the Hispanic Ethnicity population. However, 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 by 9% for the Medicaid population, and 20% for Self-Pay/Uninsured. Counts decreased for the remaining payer groups. The study region trend was consistent with the statewide trend for the Medicaid, Private Insurance and Self-Pay/Uninsured population. However, unlike the study region, the statewide rate increased for the Medicare payer population.

Exhibit 4A. Behavioral Health Hospitalization Snapshot (2013)

Indicator	Virginia	Study Region
Counts-BH Discharges		
Total BH Discharges for All Diagnoses	60,600	8,310
Counts-Leading 15 BH Discharges		
Affective Psychoses	26,709	3,697
Schizophrenic Disorders	8,136	1,596
Alcoholic Psychoses	4,037	656
Drug Psychoses	2,121	342
Depressive Disorder, Not Elsewhere Classified	3,503	257
Adjustment Reaction	2,271	236
Alcohol Dependence Syndrome	2,391	235
Senility Without Mention of Psychosis	1,688	223
Other Nonorganic Psychoses	2133	191
Symptoms Involving Head or Neck	933	157
Altered Mental Status	1,000	155
Neurotic Disorders	1,207	110
Drug Dependence	816	109
Other Organic Psychotic Conditions-Chronic	795	55
Non Dependent Abuse of Drugs	600	27
Note: Rates are not calculated where n<30. Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.		
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. Note		

Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, most of the tables in this Behavioral Health section undercount the number and rate of behavioral health hospitalizations. Please refer to Exhibit 4C, which contains information for other age cohorts.

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

Indicator	Virginia	Study Region
Crude Rates Per 100,000 Population		
All Diagnoses	734.8	706.8
Affective Psychoses	323.9	314.5
Schizophrenic Disorders	98.7	135.8
Alcoholic Psychoses	49.0	55.8
Drug Psychoses	25.7	29.1
Depressive Disorder, Not Elsewhere Classified	42.5	21.9
Adjustment Reaction	27.5	20.1
Alcohol Dependence Syndrome	29.0	20.0
Senility Without Mention of Psychosis	20.5	19.0
Other Nonorganic Psychoses	25.9	16.2
Symptoms Involving Head or Neck	11.3	13.4
Altered Mental Status	12.1	13.2
Neurotic Disorders	14.6	9.4
Drug Dependence	9.9	9.3
Other Organic Psychotic Conditions-Chronic	9.6	4.7
Non Dependent Abuse of Drugs	7.3	--
Note: Rates are not calculated where n<30. Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.		
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.		

Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, most of the tables in this Behavioral Health section undercount the number and rate of behavioral health hospitalizations. Please refer to Exhibit 4C, which contains information for other age cohorts.

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

Indicator	Study	% Change (2011-2013)			
Counts	**2011**	**2012**	**2013**	**Virginia**	**Study**
Total BH Discharges (All Diagnoses)	9,037	8,848	8,310	3%	-8%
Affective Psychoses	4,058	3,866	3,697	-2%	-9%
Alcoholic Psychoses	455	629	656	23%	44%
Schizophrenic Disorders	1,708	1,699	1,596	1%	-7%
Crude Rates per 100,000 Population					
Total BH Discharges (All Diagnoses)	786.7	761.4	706.8	1%	-10%
Affective Psychoses	353.3	332.7	314.5	-3%	-11%
Alcoholic Psychoses	39.6	54.1	55.8	21%	41%
Schizophrenic Disorders	148.7	146.2	135.8	0%	-9%

Note: Rates and/or percent change are not calculated where n<30. Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.

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	1,895	1,969	1,856	10%	-2%
	Adults Age 30-44	2,201	2,194	2,159	2%	-2%
	Adults Age 45-64	2,805	2,824	2,911	3%	4%
	Seniors Age 65+	1,044	988	909	-4%	-13%
Crude Rates per 100,000 Population						
Age	Adults Age 18-29	830.8	869.3	791.0	-2%	-5%
	Adults Age 30-44	967.9	958.3	934.6	8%	-3%
	Adults Age 45-64	947.5	930.4	957.4	2%	1%
	Seniors Age 65+	839.1	749.0	699.0	3%	-17%

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

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

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

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Sex	Female	4,765	4,465	4,189	0%	-12%
	Male	4,271	4,382	4,121	5%	-4%
Crude Rates per 100,000 Population						
Sex	Female	814.2	760.4	703.8	-1%	-14%
	Male	755.1	762.4	709.9	5%	-6%
Note: Rates and/or percent change are not calculated where n<30. Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.						
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 (2011-2013)

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Race	Asian	97	97	68	15%	-30%
	Black/African American	3,212	3,126	2,945	0%	-8%
	White	5,357	5,282	4,972	1%	-7%
Ethnicity	Hispanic Ethnicity	135	103	30	-3%	-78%
Crude Rates per 100,000 Population						
Race	Asian	221.9	213.4	145.9	8%	-34%
	Black/African American	874.5	845.2	800.5	-1%	-8%
	White	792.0	775.5	716.0	2%	-10%
Ethnicity	Hispanic Ethnicity	201.8	163.1	42.9	-4%	-79%
Note: Rates and/or percent change are not calculated where n<30. Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.						
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B.						

Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, most of the tables in this Behavioral Health section undercount the number and rate of behavioral health hospitalizations. Please refer to Exhibit 4C, which contains information for other age cohorts.

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

Indicator		Study Region			% Change (2011-2013)	
Counts		**2011**	**2012**	**2013**	**Virginia**	**Study Region**
All BH Discharges						
Payer	Medicare	2,539	2,403	2,295	5%	-10%
	Medicaid	986	910	1,078	9%	9%
	Private	4,761	4,855	4,043	-3%	-15%
	Self-Pay/Uninsured	737	672	887	15%	20%
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. Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.

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

Due to the lack of reporting on the part of a regional child/adolescent psychiatric hospital, most of the tables in this Behavioral Health section undercount the number and rate of behavioral health hospitalizations. Please refer to Exhibit 4C, which contains information for other age cohorts.

5. Adult Health Risk Factor Profile

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

- As shown in *Exhibit 5*, substantial numbers of adults have lifestyle health risks related to nutrition, weight, physical inactivity, tobacco and alcohol. For example,
    - An estimated 716,647 (79%) adults age 18+ are not meeting the guidelines for fruit and vegetable intake,
    - An estimated 562,432 (62%) adults age 18+ are overweight or obese, and
    - An estimated 471,717 (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	907,148
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	5,114,866	716,647
	Overweight or Obese	3,964,021	562,432
	Not Meeting Recommendations for Physical Activity in the Past 30 Days	3,068,920	471,717
	At-risk for Binge Drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)	1,150,845	181,430
	Smoker	1,214,781	190,501
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	2,237,754	317,502
	High Blood Pressure (told by a doctor or other health professional)	1,918,075	263,073
	Arthritis (told by a doctor or other health professional)	1,534,460	217,716
	Diabetes (told by a doctor or other health professional)	575,422	81,643
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	1,214,781	172,358
	Fair or Poor Health Status	1,022,973	145,144
Behavioral Health Risk Factors	Dissatisfied with Their Life	359,536	47,604
	Frequent Mental Distress	457,497	61,846
	Inadequate Social or Emotional Support	412,372	59,582
Estimates-Percent of Adults Age 18+			
Lifestyle Risk Factors	Less than Five Servings of Fruits and Vegetables Per Day	80%	79%
	Overweight or Obese	62%	62%
	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%	21%
Chronic Conditions	High Cholesterol (was checked, and told by a doctor or other health professional it was high)	35%	35%
	High Blood Pressure (told by a doctor or other health professional)	30%	29%
	Arthritis (told by a doctor or other health professional)	24%	24%
	Diabetes (told by a doctor or other health professional)	9%	9%
General Health Status	Limited in any Activities because of Physical, Mental or Emotional Problems	19%	19%
	Fair or Poor Health Status	16%	16%
Behavioral Health Risk Factors	Dissatisfied with Their Life	6%	5%
	Frequent Mental Distress	7%	7%
	Inadequate Social or Emotional Support	6%	7%

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

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

6. Youth Health Risk Factor Profile

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

- As shown in *Exhibit 6,* substantial numbers of youth have lifestyle health risks related to nutrition, weight, alcohol, mental health, physical inactivity, and tobacco. For example,
    - An estimated 7,792 (8%) youth age 14-19 and 18,287 (25%) youth age 10-14 met the guidelines for fruit and vegetable intake,
    - An estimated 26,895 (29%) youth age 14-19 are overweight or obese, and
    - An estimated 52,416 (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
Estimates-Counts			
High School Youth Age 14-19			
Total Estimated High School Youth Age 14-19		*654,462*	*94,006*
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	54,707	7,792
	Overweight or Obese	179,050	26,895
	Not Meeting Recommendations for Physical Activity in the Past Week	363,586	52,416
	Used Tobacco in the Past 30 Days	118,572	16,962
	Have at least One Drink of Alcohol At least One Day in the Past 30 Days	178,173	25,092
General Health Status	Feel Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	165,270	23,008
Middle School Youth Age 10-14			
Total Estimated Middle School Youth Age 10-14		*523,850*	*74,542*
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	125,285	18,287
	Not Meeting Recommendations for Physical Activity in the Past Week	178,443	25,208
	Used Tobacco in the Past 30 Days	19,192	2,840
Estimates-Percent			
High School Youth Age 14-19			
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	8%	8%
	Overweight or Obese	27%	29%
	Not Meeting Recommendations for Physical Activity in the Past Week	56%	56%
	Used Tobacco in the Past 30 Days	18%	18%
	Have at least One Drink of Alcohol At least One Day in the Past 30 Days	27%	27%
General Health Status	Feel Sad or Hopeless (almost every day for two or more weeks in a row so that they stopped doing some usual activities)	25%	24%
Middle School Youth Age 10-14			
Risk Factors	Met Guidelines for Fruit and Vegetable Intake	24%	25%
	Not Meeting Recommendations for Physical Activity in the Past Week	34%	34%
	Used Tobacco in the Past 30 Days	4%	4%

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

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

7. Uninsured Profile

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

As shown in *Exhibit 7:*

- At any given point in 2014, an estimated 146,615 residents of the study region were uninsured.
- The estimated number of uninsured children age 0-18 was 15,332 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 131,283 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	146,615
Uninsured Children Age 0-18	120,105	15,332
Uninsured Children Age 0-18 <=138% FPL	327,185	4,674
Uninsured Children Age 0-18 <=200% FPL	479,797	7,340
Uninsured Children Age 0-18 <=250% FPL	578,328	9,019
Uninsured Children Age 0-18 <=400% FPL	749,463	12,127
Uninsured Children Age 0-18 138-400% FPL	422,276	7,454
Uninsured Adults Age 19-64	893,456	131,283
Uninsured Adults Age 19-64 <=138% FPL	327,185	47,321
Uninsured Adults Age 19-64 <=200% FPL	479,797	70,357
Uninsured Adults Age 19-64 <=250% FPL	578,328	85,186
Uninsured Adults Age 19-64 <=400% FPL	749,463	112,296
Uninsured Adults Age 19-64 138-400% FPL	422,276	64,971
Estimated Uninsured Percent		
Uninsured Children Percent	6%	5%
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.		

8. Cancer Profile

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

As shown in *Exhibit 8A*:

- From 2008-2012, there were 25,472 residents diagnosed with cancer in the study region.
- The three leading sites of cancer were breast (among females only), lung and bronchus, and prostate.
- Local-stage diagnosis rates were lower (worse) in the study region than in Virginia for breast (among females only), melanoma, oral cavity, colorectal, ovarian and cervical cancers.

As shown in *Exhibit 8B*:

- From 2009-2013, there were 10,020 cancer deaths in the study region.
- The leading sites for cancer deaths in the study region were lung and bronchus, colorectal, breast (female only), and prostate. The study region death rates for lung and bronchus far exceeded the rates for other cancers.
- The study region rates were higher (worse) than the statewide rates for breast (among females only), cervical, and prostate deaths. The study region rates were lower than the statewide rates overall, and for colorectal, lung and bronchus, and melanoma deaths. Oral cavity and ovarian cancer were the same as the statewide rates.

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

Indicator	Virginia	Study Region
Counts		
2008-2012 Cancer Incidence -All Sites	183,650	25,472
2008-2012 Diagnosed at Local Stage-All Sites	82,981	11,386
2008-2012 Cancer Incidence -Breast (Female Only)	28,621	4,101
2008-2012 Diagnosed at Local Stage-Breast (Female Only)	17,948	2,485
2008-2012 Cancer Incidence -Lung and Bronchus	26,509	3,829
2008-2012 Diagnosed at Local Stage-Lung and Bronchus	5,021	765
2008-2012 Cancer Incidence -Prostate	25,706	3,335
2008-2012 Diagnosed at Local Stage-Prostate	20,549	2,699
2008-2012 Cancer Incidence -Colorectal	16,015	2,267
2008-2012 Diagnosed at Local Stage-Colorectal	6,266	858
2008-2012 Cancer Incidence -Melanoma	7,673	1,185
2008-2012 Diagnosed at Local Stage-Melanoma	5,601	843
2008-2012 Cancer Incidence -Oral Cavity	4,550	623
2008-2012 Diagnosed at Local Stage-Oral Cavity	1,353	146
2008-2012 Cancer Incidence -Ovarian	2,698	350
2008-2012 Diagnosed at Local Stage-Ovarian	388	45
2008-2012 Cancer Incidence -Cervical	1,337	214
2008-2012 Diagnosed at Local Stage-Cervical	620	91
Rates (percent diagnosed at the local stage) *		
2008-2012 Diagnosed at Local Stage-All Sites pct. of Total Diagnosed	45%	45%
2008-2012 Diagnosed at Local Stage-Breast (Female Only) pct. of Total Diagnosed	63%	61%
2008-2012 Diagnosed at Local Stage-Lung and Bronchus pct. of Total Diagnosed	19%	20%
2008-2012 Diagnosed at Local Stage-Prostate pct. of Total Diagnosed	80%	81%
2008-2012 Diagnosed at Local Stage-Colorectal pct. of Total Diagnosed	39%	38%
2008-2012 Diagnosed at Local Stage-Melanoma pct. of Total Diagnosed	73%	71%
2008-2012 Diagnosed at Local Stage-Oral Cavity pct. of Total Diagnosed	30%	23%
2008-2012 Diagnosed at Local Stage-Ovarian pct. of Total Diagnosed	14%	13%
2008-2012 Diagnosed at Local Stage-Cervical Cancer pct. of Total Diagnosed	46%	43%

*Notes: Rates and/or percent change are not calculated where n<30. Age-adjusted rates are not provided because record level data cannot be accessed due to patient confidentiality restrictions. * There may be cases in the study region where the diagnosis stage is unknown.*

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

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

Indicator*	Virginia	Study Region
Counts		
Five Year Total (2009-2013) Cancer Deaths, All Sites	70,846	10,020
Five Year Total (2009-2013) Cancer Deaths, Lung and Bronchus	19,765	2,723
Five Year Total (2009-2013) Cancer Deaths, Colorectal	6,021	817
Five Year Total (2009-2013) Cancer Deaths, Breast (Female Only)	5,252	816
Five Year Total (2009-2013) Cancer Deaths, Prostate	3,451	517
Five Year Total (2009-2013) Cancer Deaths, Ovarian	1,799	253
Five Year Total (2009-2013) Cancer Deaths, Melanoma	1,194	166
Five Year Total (2009-2013) Cancer Deaths, Oral Cavity	1,008	145
Five Year Total (2009-2013) Cancer Deaths, Cervical	400	69
Rates per 100,000 Population		
Five Year Total (2009-2013) Cancer Deaths, All Sites	175.2	173.7
Five Year Total (2009-2013) Cancer Deaths, Lung and Bronchus	48.9	47.2
Five Year Total (2009-2013) Cancer Deaths, Colorectal	14.9	14.2
Five Year Total (2009-2013) Cancer Deaths, Breast (Female Only)	25.5	28.0
Five Year Total (2009-2013) Cancer Deaths, Prostate	17.4	18.1
Five Year Total (2009-2013) Cancer Deaths, Ovarian	8.7	8.7
Five Year Total (2009-2013) Cancer Deaths, Melanoma	3.0	2.9
Five Year Total (2009-2013) Cancer Deaths, Oral Cavity	2.5	2.5
Five Year Total (2009-2013) Cancer Deaths, Cervical	1.9	2.4
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix B for methods details.		

9. Communicable Disease Profile

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

- In 2014, there were 8,384 cases of chlamydia, 2,243 cases of gonorrhea, 233 new cases of HIV, and 125 cases of early syphilis.
- The study region had a higher rate (worse) of disease than Virginia as a whole for all selected communicable diseases.

Exhibit 9. Selected Communicable Disease Profile (2014)

Indicator	Virginia	Study Region
Counts		
Chlamydia Diagnoses	35,473	8,384
Gonorrhea Diagnoses	8,128	2,243
Newly Diagnosed Cases of HIV Disease	940	233
Total Early Syphilis Diagnoses	545	125
Crude Rates per 100,000 Population		
Chlamydia Diagnoses (rate per 100,000)	429.4	716.9
Gonorrhea Diagnoses (rate per 100,000)	98.4	191.8
Newly Diagnosed Cases of HIV Disease (rate per 100,000)	11.4	19.9
Total Early Syphilis Diagnoses (rate per 100,000)	6.6	10.7
Note: Rates are not calculated where n<30.		
Source: Community Health Solutions analysis of data from the Virginia Department of Health. See Appendix B for methods details.		

APPENDIX A: Zip Code-Level Maps

The Zip Code-Level maps in this section illustrate the geographic distribution of the zip code-level study region on key health status indicators. Following the maps is a table with the underlying data. 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	

Technical Notes

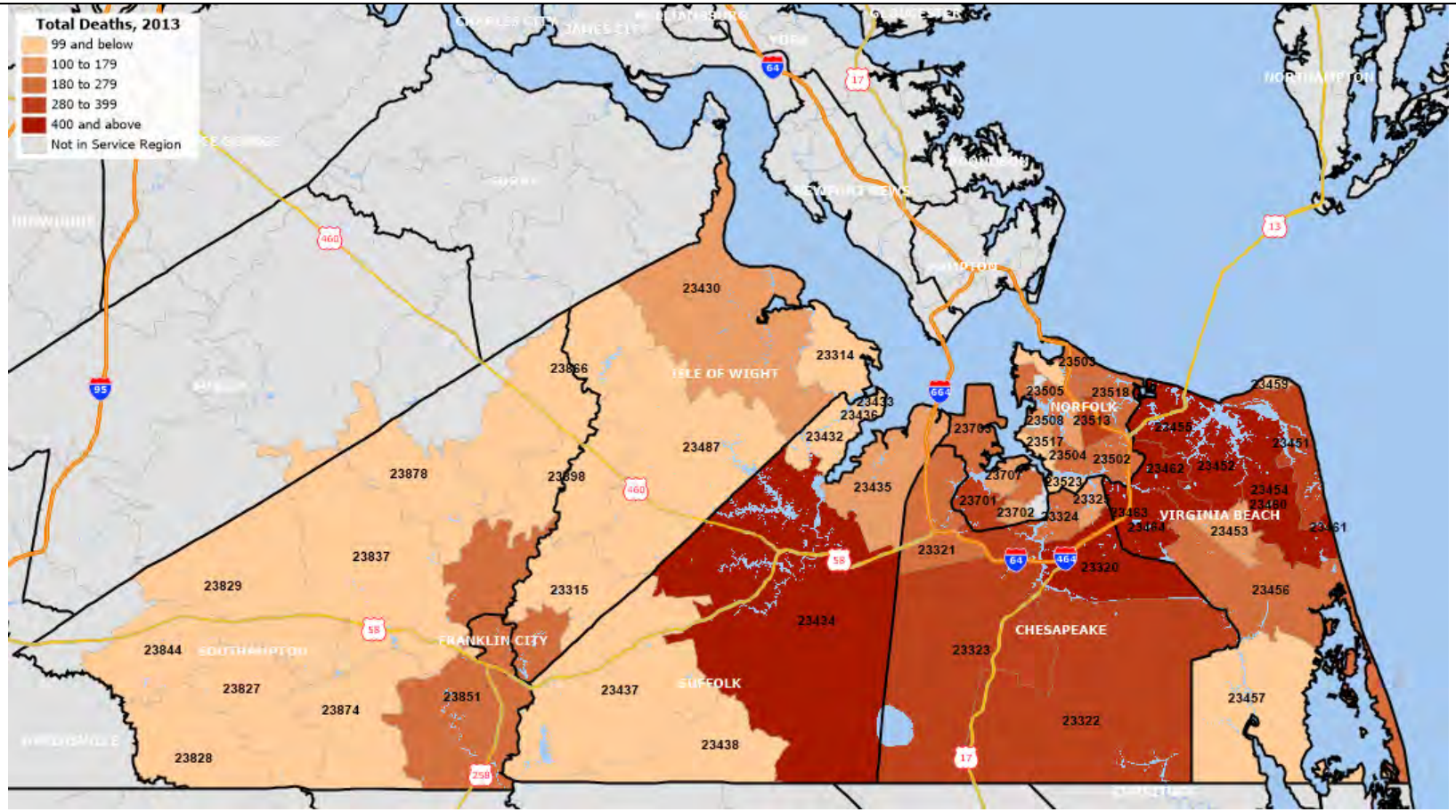
1. The maps and data include 27 zip codes, as identified by Sentara Norfolk General Hospital, most of which fall within the cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach City; and the counties of Isle of Wight and Southampton. It is important to note that zip code boundaries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

2. The maps show counts rather than rates. Rates are not mapped at the zip code-level because in some zip codes the population is too small to support rate-based comparisons.

3. Data are presented in natural breaks.

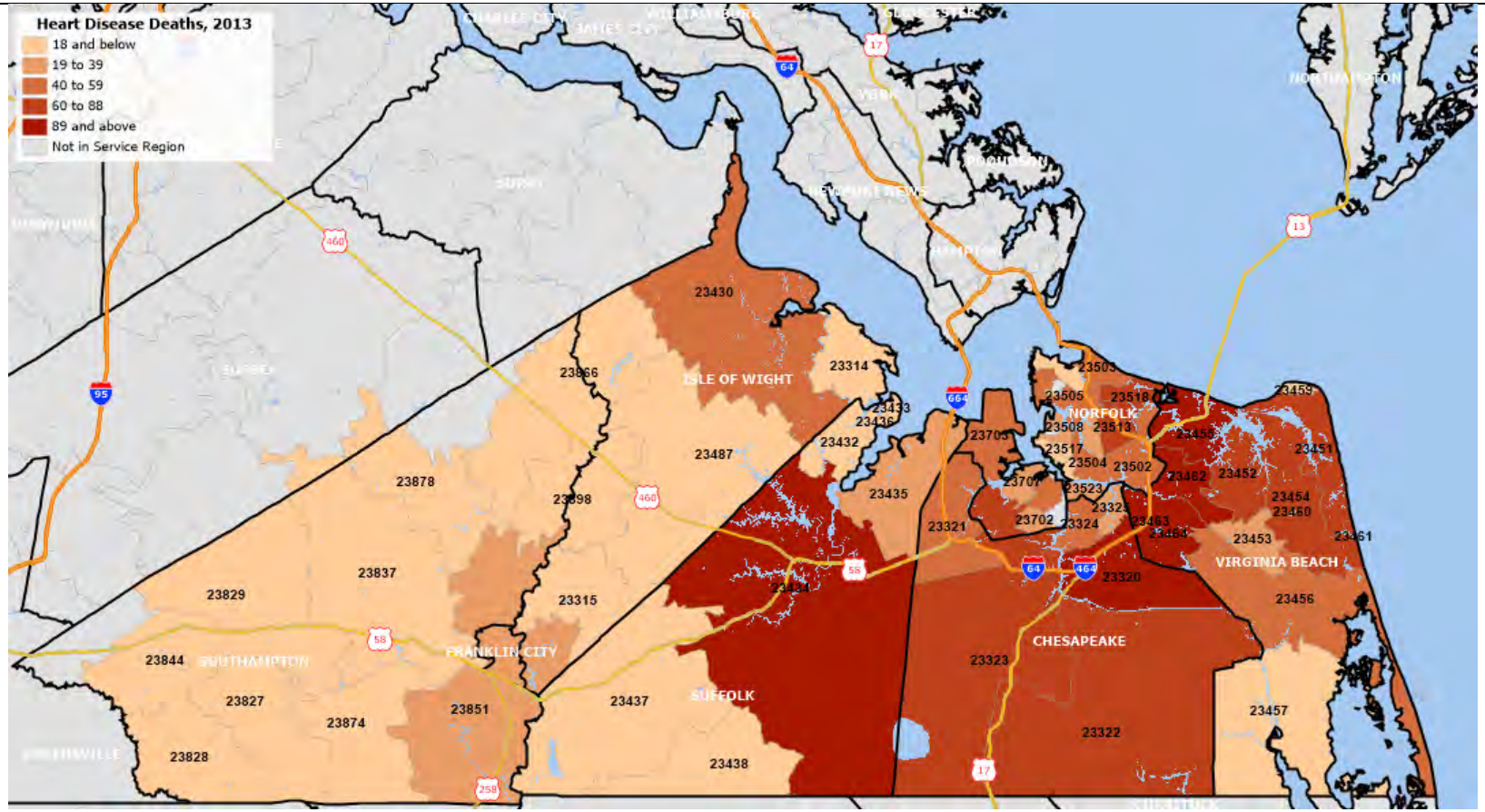
4. Zip Code-Level Study Region zip codes with zero values are noted.

Map 1: Total Deaths, 2013



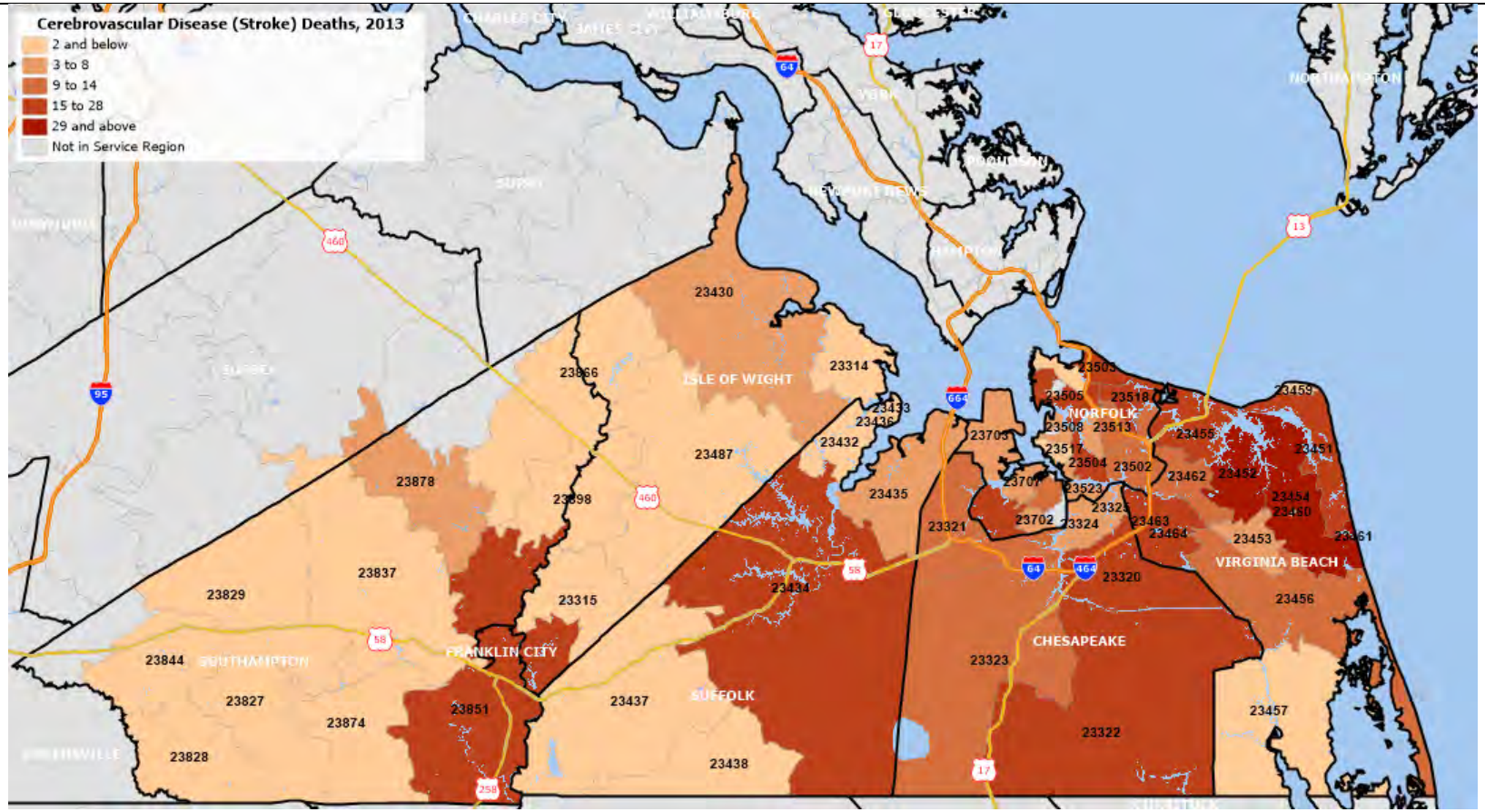
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no recorded deaths for zip codes 23460 and 23461.

Map 2: Heart Disease Deaths, 2013



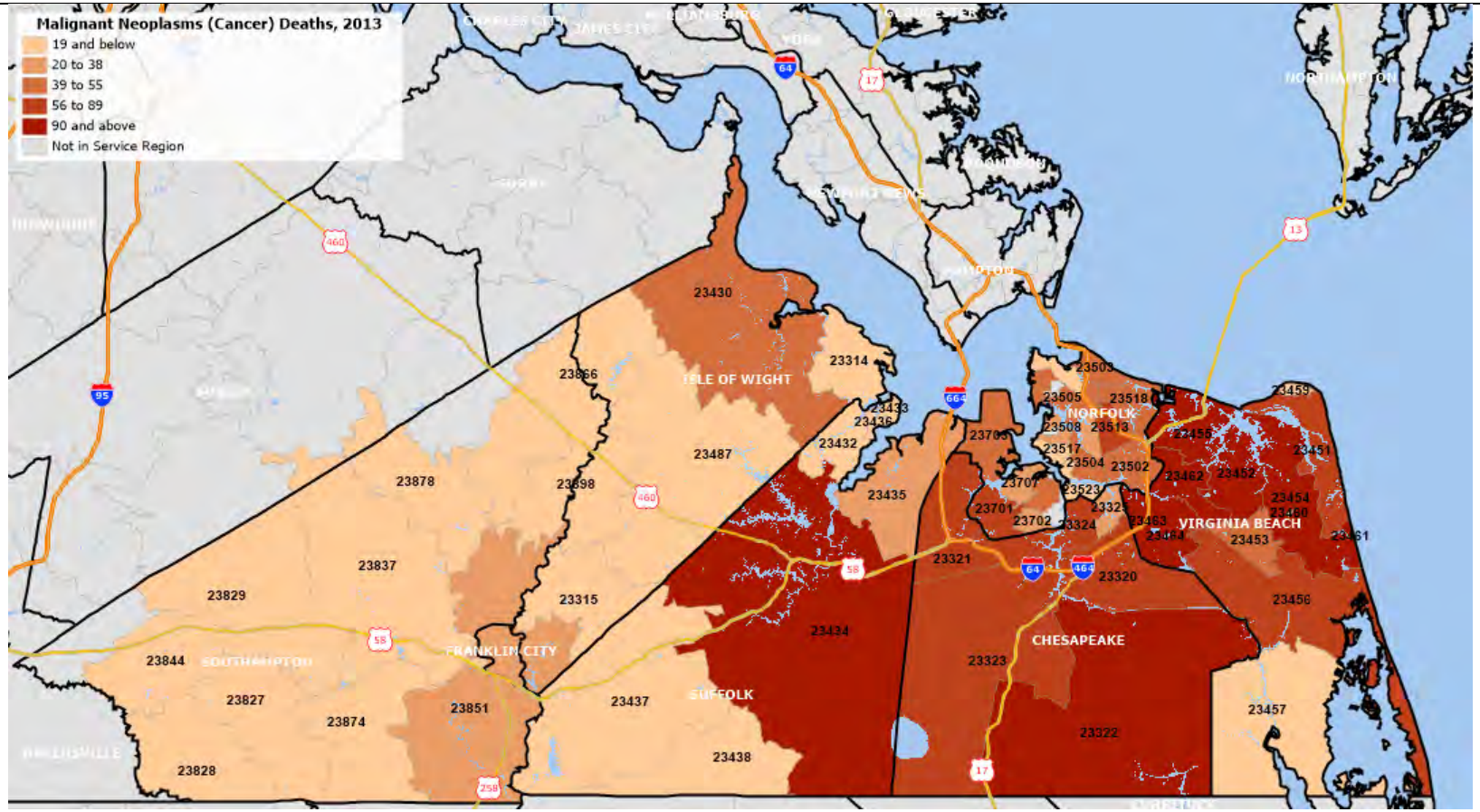
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported heart disease deaths for zip codes 23459, 23460, 23461, 23463 and 23511.

Map 3: Cerebrovascular Disease (Stroke) Deaths, 2013



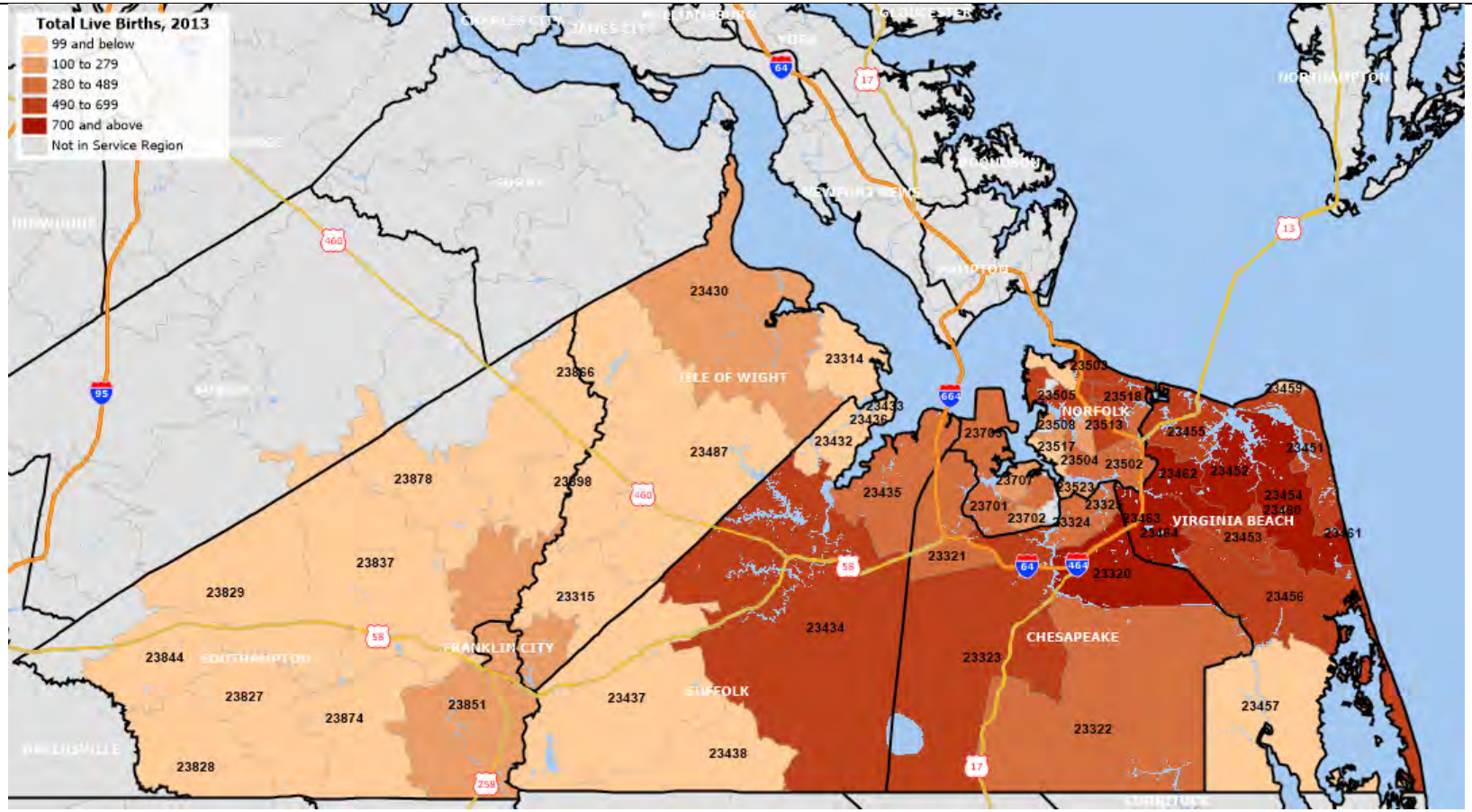
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported stroke deaths for zip codes 23411, 23432, 23436, 23437, 23438, 23457, 23459, 23460, 23461, 23463, 23507, 23511, 23517, 23828, 23837, 23844, and 23874.

Map 4: Malignant Neoplasms (Cancer) Deaths, 2013



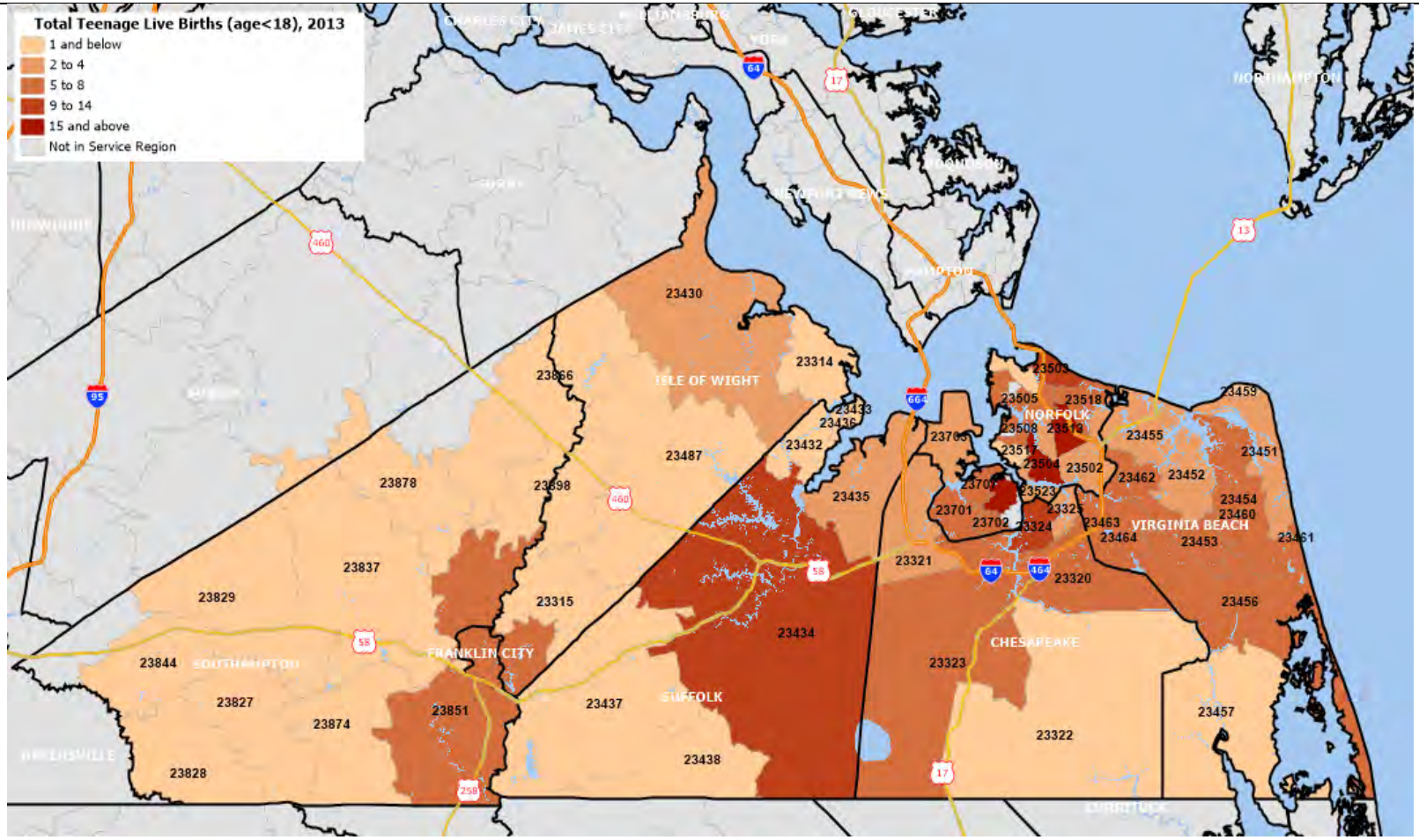
Source: Community Health Solutions analysis of death record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported cancer deaths for zip codes 23459, 23460, 23461, 23463, 23511, and 23828.

Map 5: Total Live Births, 2013



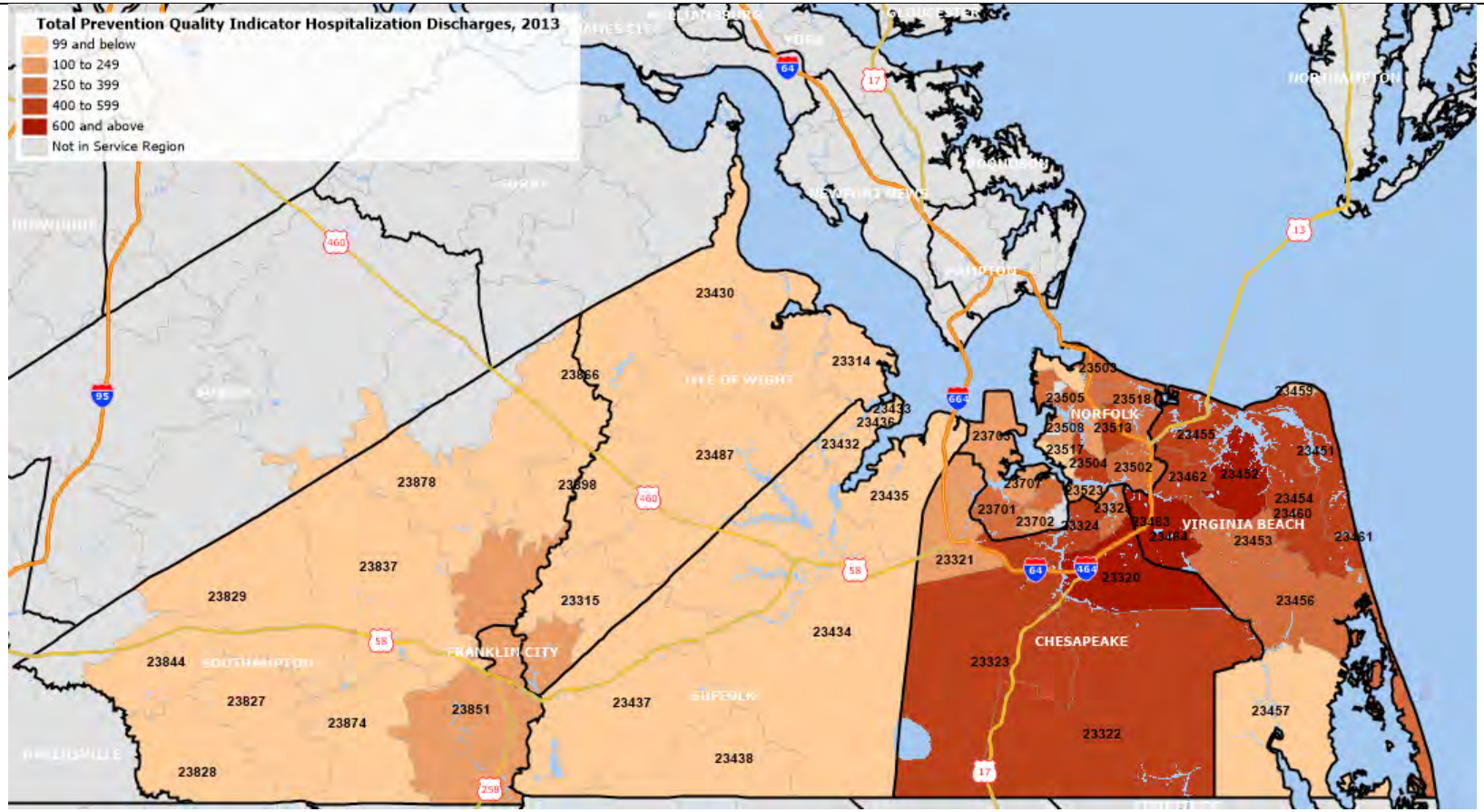
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported live births for zip codes 23459 and 23463.

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



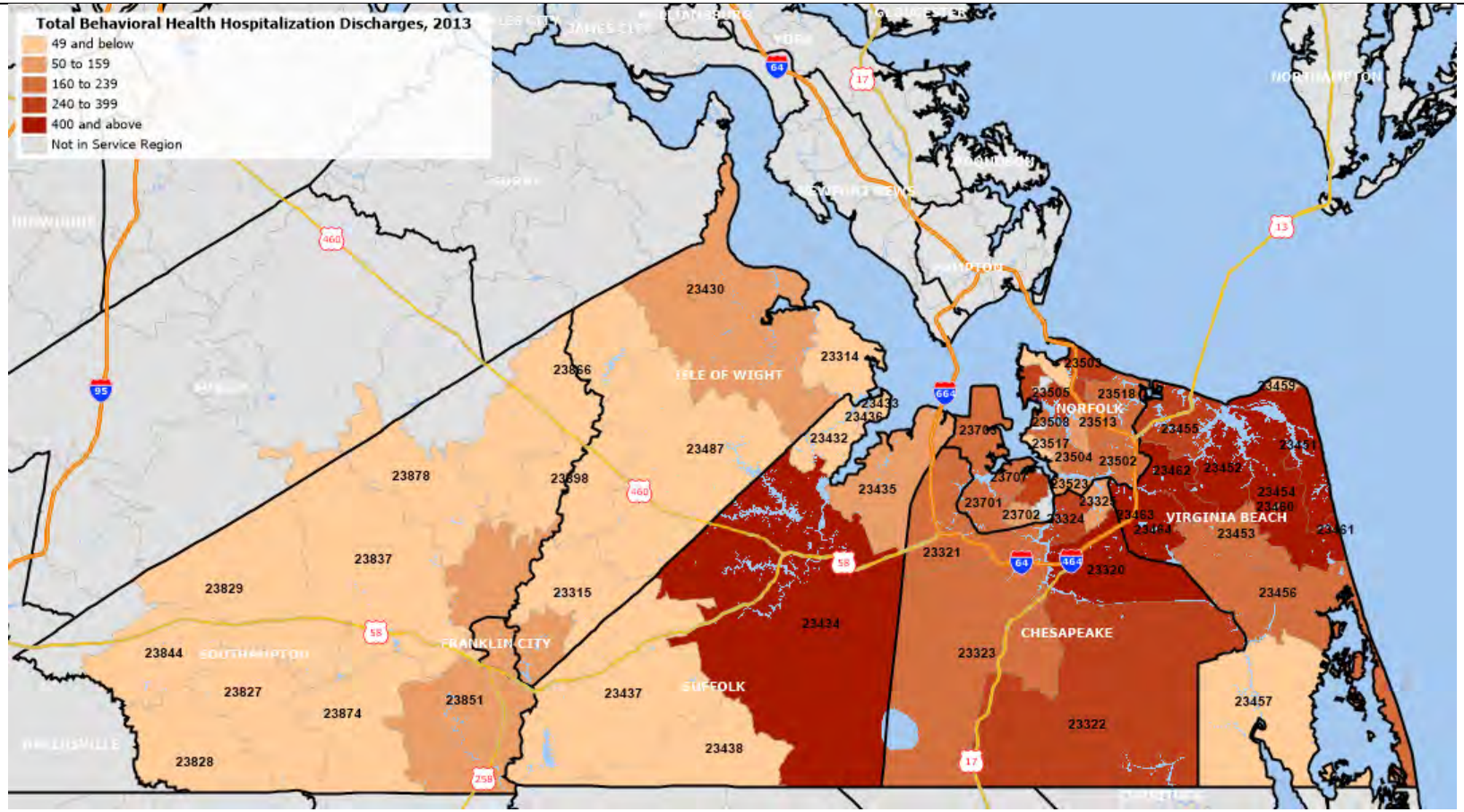
Source: Community Health Solutions analysis of birth record data from the Virginia Department of Health. See details in methods in Appendix B. Notes: There were no reported teenage live births for zip codes 23315, 23322, 23432, 23433, 23436, 23437, 23438, 23457, 23459, 23460, 23461, 23463, 23487, 23507, 23511, 23827, 23828, 23829, 23837, 23844, 23866, 23874, 23878, and 23898.

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



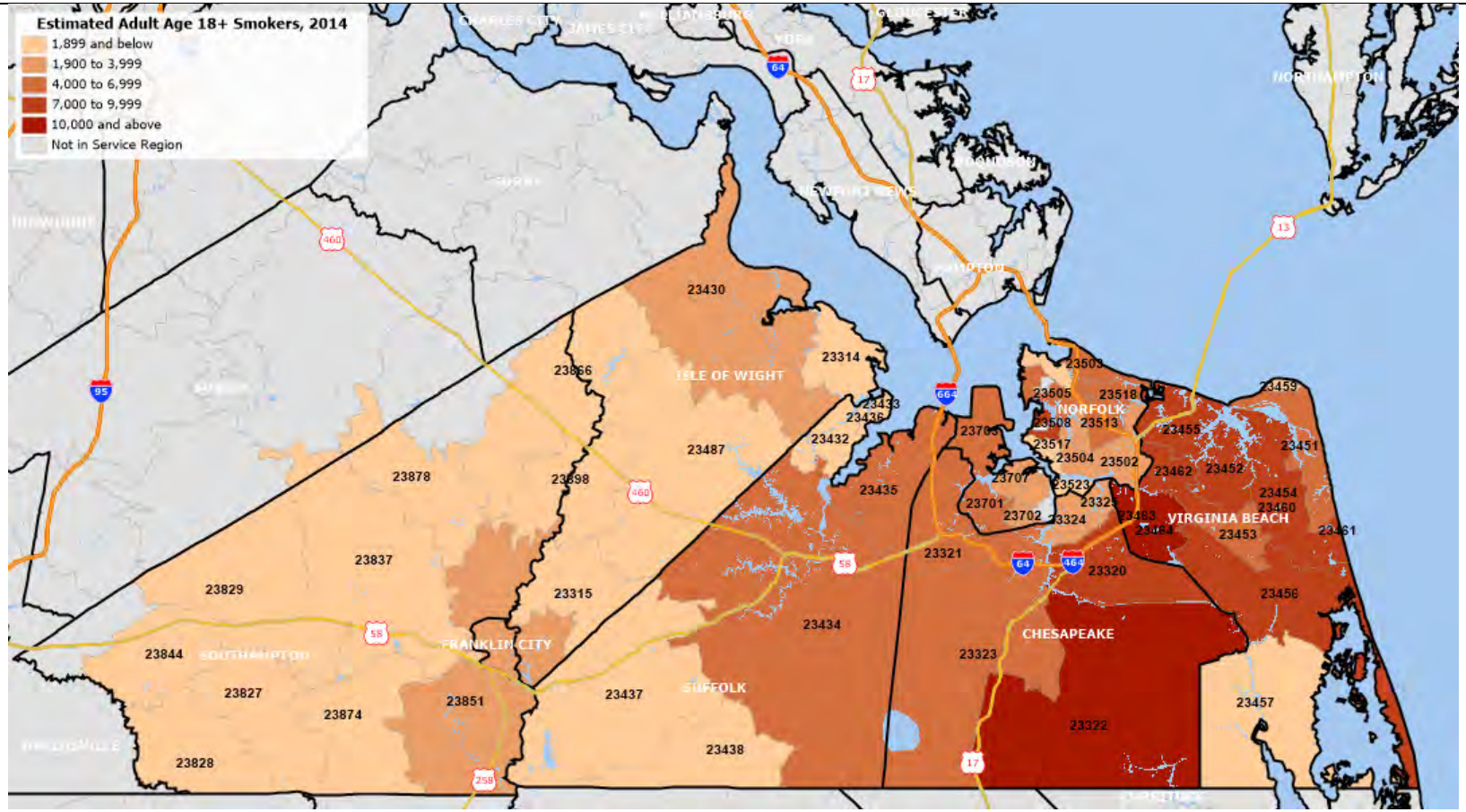
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B. Notes: There were no reported Prevention Quality Indicator Hospital Discharges for zip codes 23436, 23459, 23460, and 23511.

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



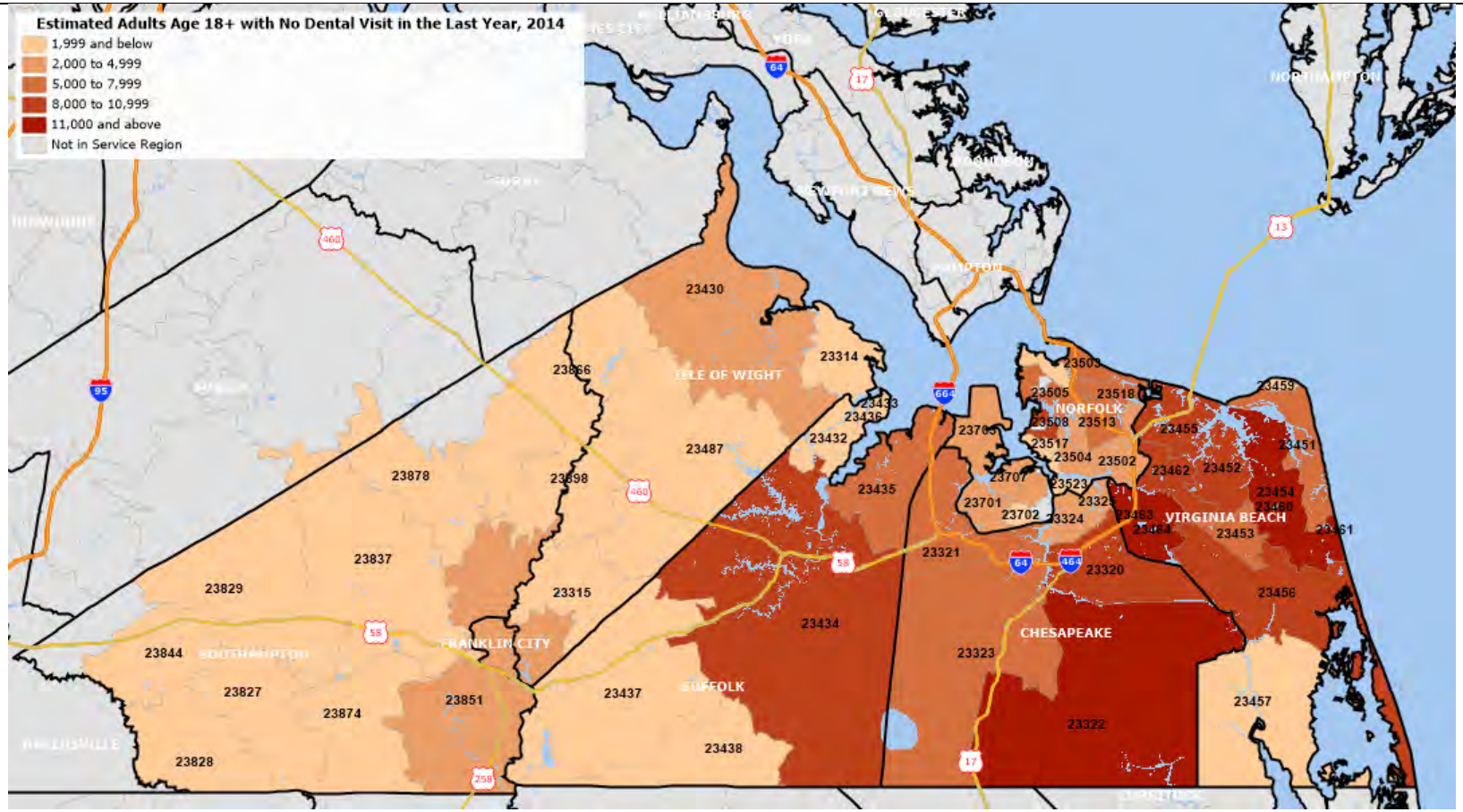
Source: Community Health Solutions analysis of hospital discharge data from Virginia Health Information and demographic data from Alteryx, Inc. See details on methods in Appendix B. There were no reported Behavioral Health discharges for zip codes 23459, 23460, 23461, and 23828. *Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.*

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



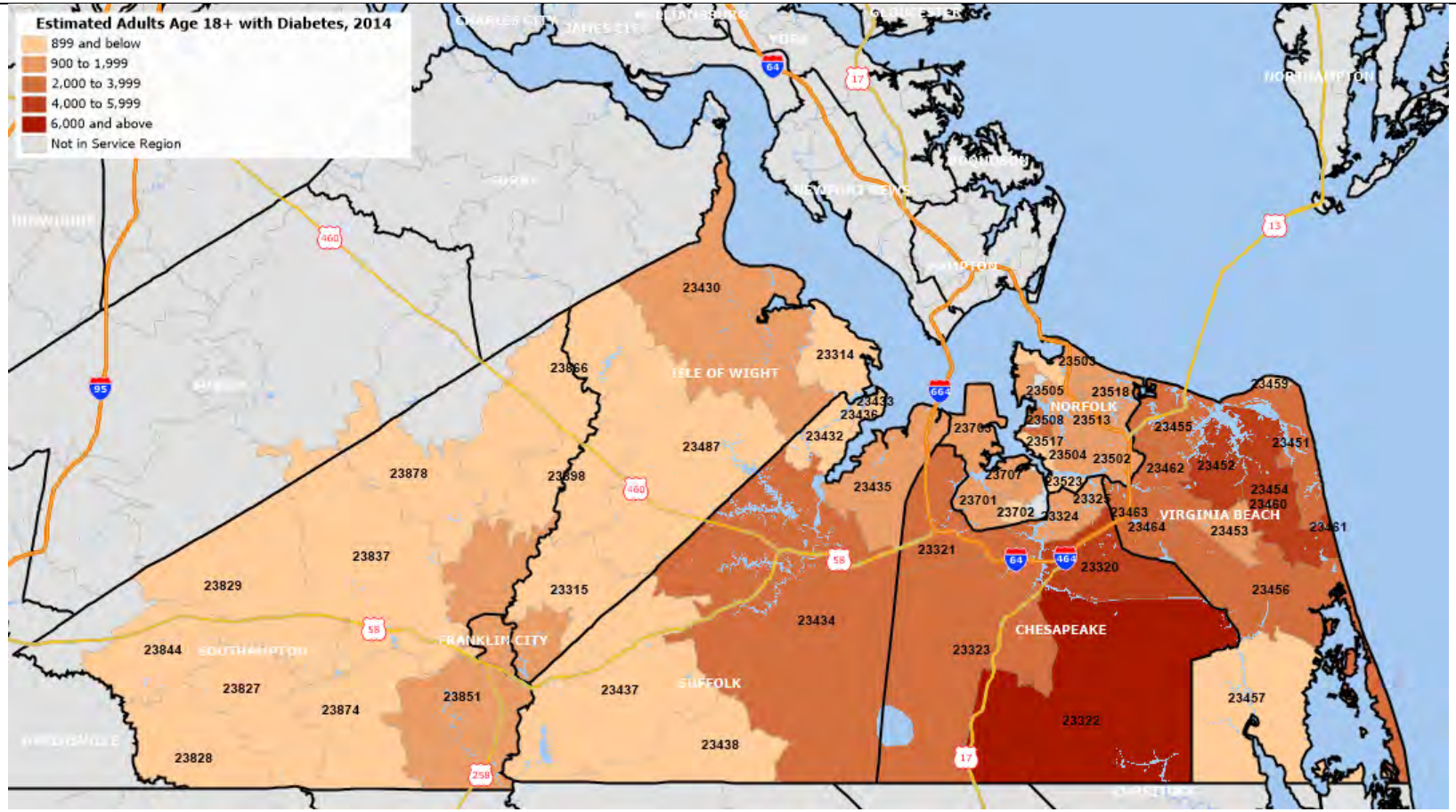
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

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



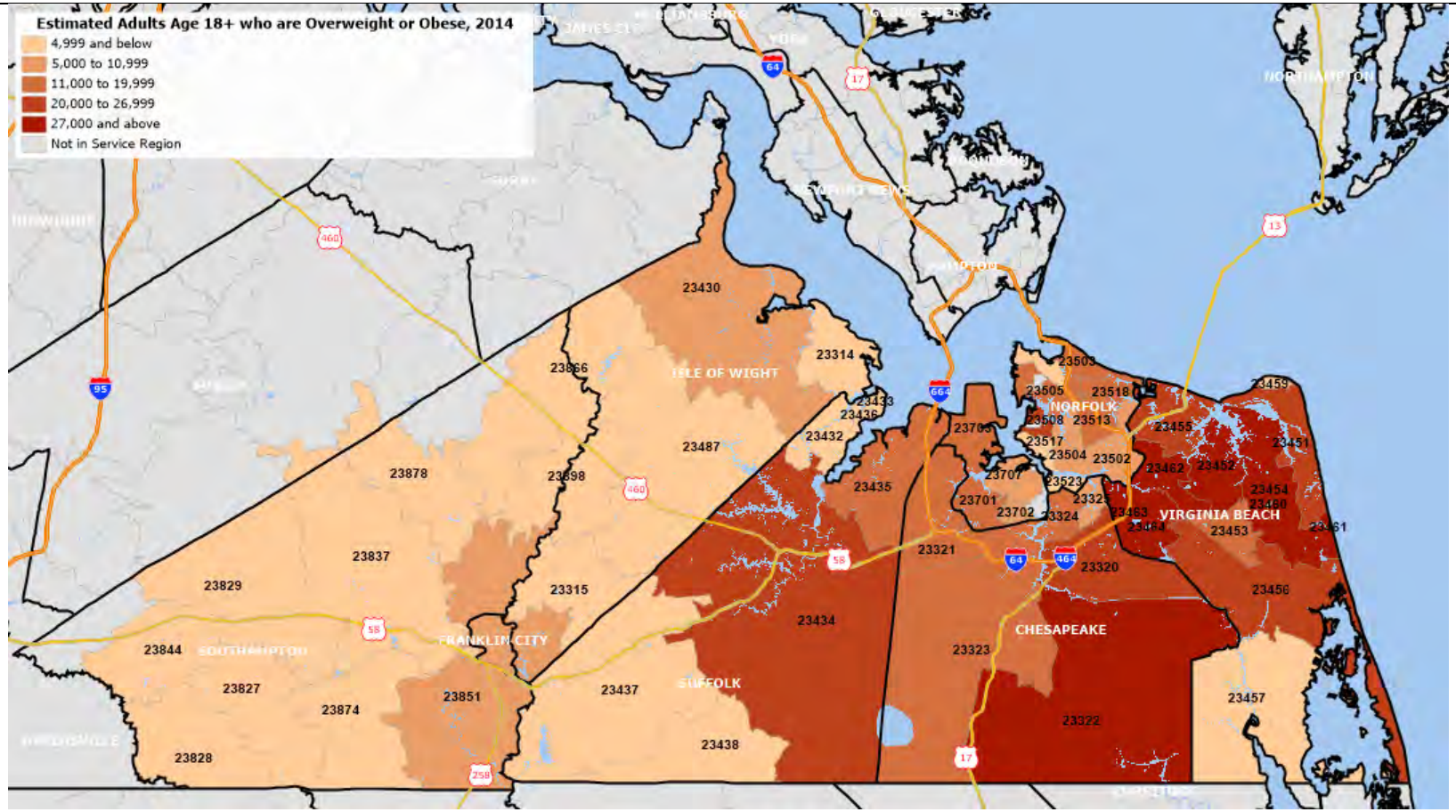
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

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



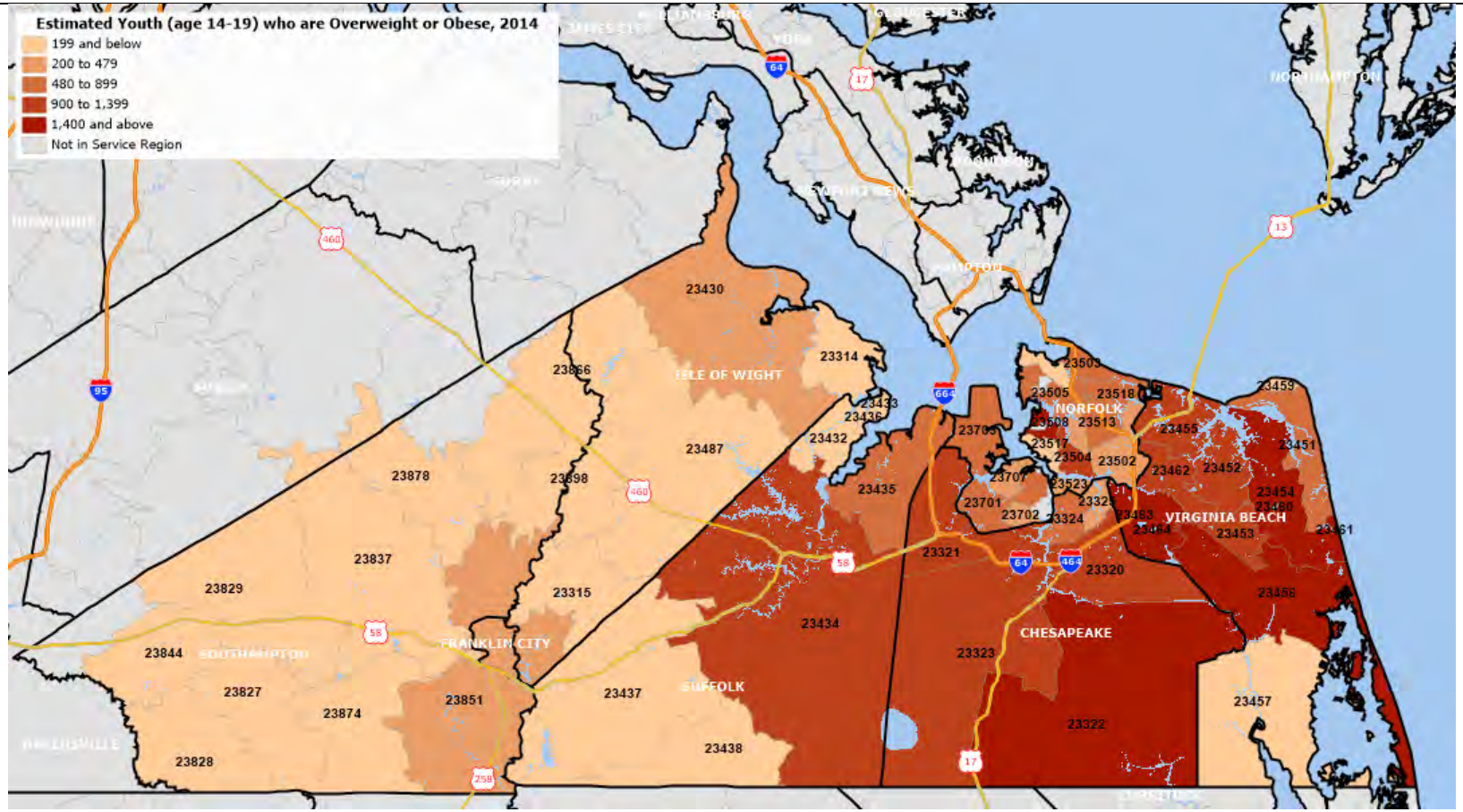
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See details in methods in Appendix B.

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



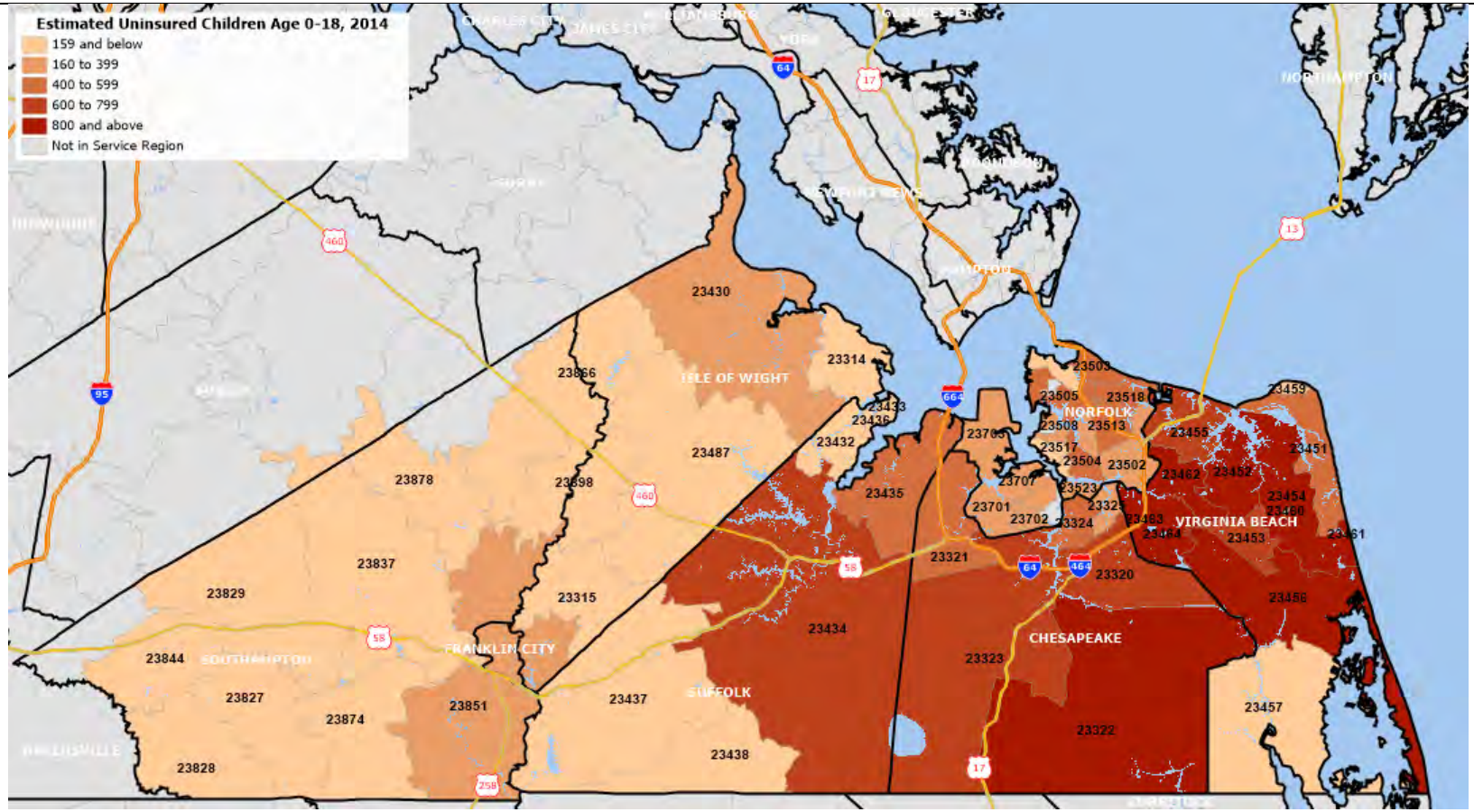
Source: Estimates produced by Community Health Solutions using Virginia Behavioral Risk Factor Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B.

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



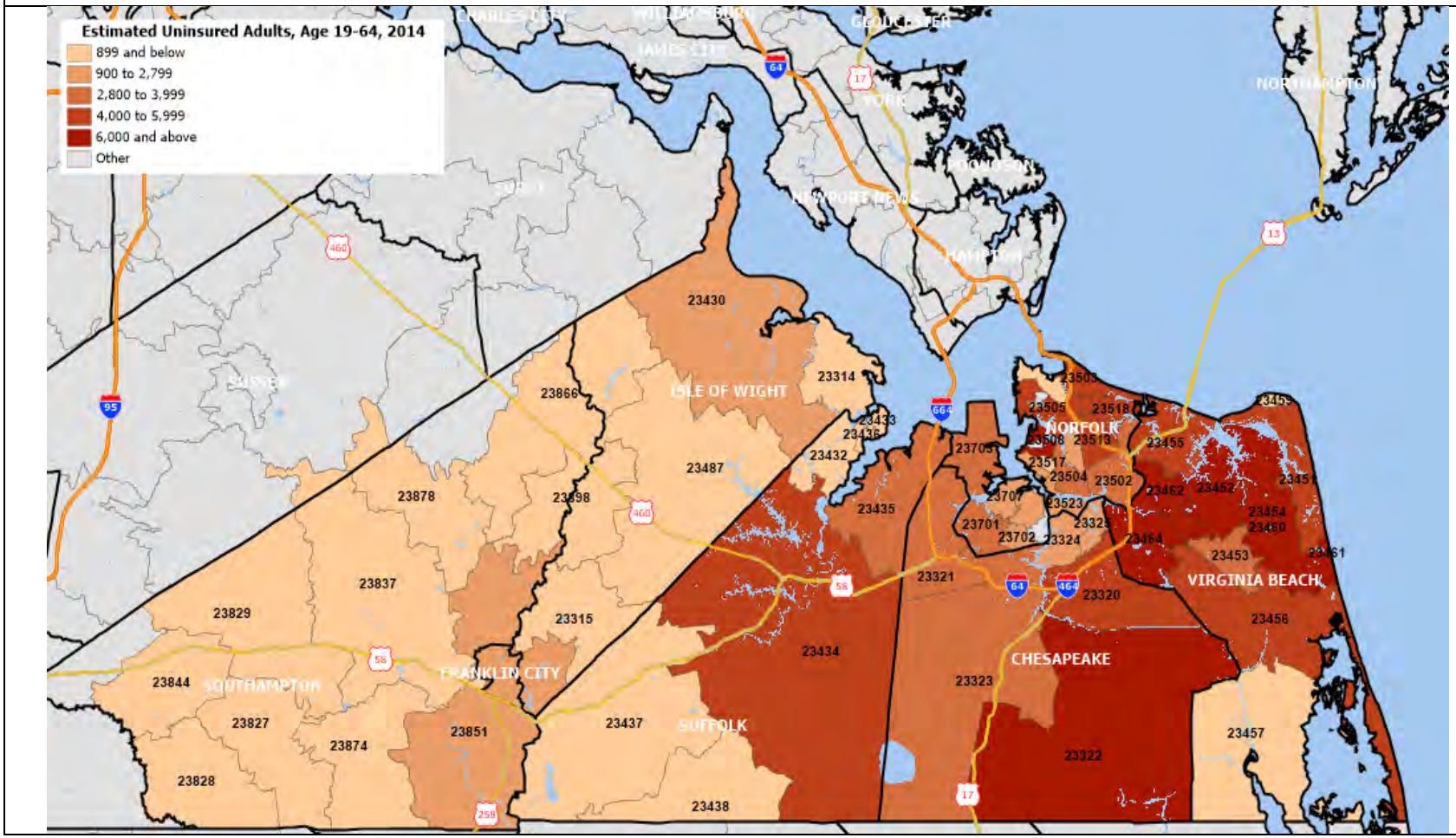
Source: Estimates produced by Community Health Solutions using Virginia Youth Risk Behavioral Surveillance System data and local demographic estimates from Alteryx, Inc. See Appendix B. Data Sources for details.

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



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

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



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

	Total Deaths, 2013	Heart Disease Deaths, 2013	Cerebrovascular Disease (Stroke) Deaths, 2013	Malignant Neoplasms (Cancer) Deaths, 2013	Total Live Births, 2013	Total Teenage Live Births (age<18), 2013	Total Prevention Quality Indicator Hospitalization Discharges, 2013	Total Behavioral Health Hospitalization Discharges, 2013	Estimated Adult Age 18+ Smokers, 2014	Estimated Adults Age 18+ with No Dental Visit in the Last Year, 2014	Estimated Adults Age 18+ with Diabetes, 2014	Estimated Adults Age 18+ who are Overweight or Obese, 2014	Estimated High School-aged Youth (age 14-19) who are Overweight or Obese, 2014	Estimated Uninsured Children Age 0-18, 2014	Estimated Uninsured Adults, Age 19-64, 2014
23314 Carrollton	50	10	0	14	98	1	22	34	1,045	1,121	743	3,446	151	121	652
23315 Carrsville	15	3	1	6	16	0	8	11	185	216	110	729	29	22	124
23320 Chesapeake	404	104	22	77	838	7	810	449	8,213	9,784	4,183	25,501	1,065	797	5,301
23321 Chesapeake	260	55	10	61	334	2	185	174	5,283	6,086	2,712	15,933	936	574	3,230
23322 Chesapeake	357	72	15	106	454	0	483	318	11,005	12,972	6,029	27,911	1,847	1,013	6,164
23323 Chesapeake	286	64	11	64	492	5	452	223	5,758	7,015	3,409	16,075	986	631	3,438
23324 Chesapeake	202	48	6	56	378	12	556	266	2,616	3,549	1,376	11,249	554	420	2,137
23325 Chesapeake	172	35	7	31	288	2	297	114	1,983	2,203	1,152	8,411	353	272	1,635
23430 Smithfield	169	43	5	45	133	2	58	109	2,148	2,683	1,091	8,317	396	291	1,447
23432 Suffolk	11	5	0	2	7	0	6	7	254	357	130	728	34	18	139
23433 Suffolk	15	2	2	3	4	0	5	9	205	288	107	610	17	14	109
23434 Suffolk	482	107	16	128	627	11	93	432	6,652	8,755	3,241	21,762	1,186	770	4,641
23435 Suffolk	152	36	7	34	379	3	74	116	4,429	5,526	1,765	12,224	700	499	2,876
23436 Suffolk	11	3	0	1	7	0	0	1	168	235	85	481	17	13	96
23437 Suffolk	27	7	0	6	47	0	27	26	707	911	334	2,220	85	58	440
23438 Suffolk	13	5	0	5	18	0	2	8	350	496	164	935	35	25	190
23451 Virginia Beach	314	78	16	79	597	3	447	485	6,119	7,391	2,796	21,507	605	531	4,448
23452 Virginia Beach	477	76	29	117	833	2	629	435	8,055	9,468	4,590	28,965	1,215	888	6,175
23453 Virginia Beach	157	24	6	41	544	8	262	205	4,820	5,247	1,566	16,013	946	665	3,808
23454 Virginia Beach	452	83	32	107	774	7	553	495	9,595	11,231	4,001	29,148	1,410	937	6,380
23455 Virginia Beach	400	89	22	100	668	3	423	248	7,291	8,015	2,842	25,768	949	670	5,302
23456 Virginia Beach	231	44	13	60	581	7	301	205	8,465	8,887	3,286	23,048	1,455	905	5,541
23457 Virginia Beach	33	2	0	12	32	0	55	18	611	711	388	2,143	83	55	458
23459 Virginia Beach	1	0	0	0	0	0	0	0	8	5	13	52	4	4	14
23460 Virginia Beach	0	0	0	0	1	0	0	0	159	206	205	415	65	4	150
23461 Virginia Beach	0	0	0	0	1	0	1	0	236	296	39	581	67	4	150
23462 Virginia Beach	407	90	12	95	1,026	8	550	429	9,144	10,427	3,135	29,565	1,216	923	6,469
23463 Virginia Beach	1	0	0	0	0	0	3	1	73	102	9	232	10	7	49
23464 Virginia Beach	465	101	19	117	943	6	613	429	11,957	13,902	3,497	34,643	1,680	1,118	7,690
23487 Windsor	60	14	1	15	55	0	17	40	680	755	501	3,047	132	96	537
23502 Norfolk	237	57	11	50	317	3	274	190	3,796	3,438	1,396	10,323	400	325	2,874
23503 Norfolk	229	46	15	41	543	9	313	290	5,850	5,483	1,907	15,370	508	507	4,672
23504 Norfolk	229	43	17	45	412	15	505	218	3,471	3,717	1,769	10,530	1,051	525	3,161
23505 Norfolk	232	56	17	39	648	7	354	244	5,643	6,036	1,603	13,959	502	508	4,243
23507 Norfolk	49	13	0	9	53	0	33	32	1,343	1,270	534	3,462	50	65	1,065
23508 Norfolk	119	26	4	28	214	5	182	165	9,627	9,469	2,600	21,131	1,412	330	7,711
23509 Norfolk	124	28	3	28	170	4	228	106	2,542	2,632	901	6,420	294	218	1,782
23510 Norfolk	62	13	3	14	91	2	94	70	1,234	1,236	740	3,571	104	89	1,126
23511 Norfolk	3	0	0	0	29	0	0	4	461	496	276	1,285	81	54	519
23513 Norfolk	292	68	12	65	522	16	482	202	5,321	5,165	1,597	14,945	677	559	4,375
23517 Norfolk	35	11	0	9	56	1	69	57	873	873	359	2,351	54	55	757
23518 Norfolk	249	62	15	43	501	6	327	200	5,933	5,815	1,824	14,163	482	463	4,043
23523 Norfolk	70	19	6	10	141	4	195	77	920	862	491	3,086	261	198	954
23701 Portsmouth	333	67	21	76	315	8	259	214	4,965	4,133	1,992	13,146	496	265	2,963
23702 Portsmouth	108	25	4	32	243	6	136	104	2,027	1,668	844	5,441	240	167	1,435
23703 Portsmouth	190	44	4	42	393	4	175	165	5,571	4,341	1,677	12,182	603	334	3,088
23704 Portsmouth	215	43	9	43	355	15	328	271	3,315	2,957	1,170	9,108	515	255	2,205
23707 Portsmouth	152	35	6	22	242	5	153	182	2,844	2,511	1,141	6,850	275	198	1,677
23827 Boykins	18	3	2	4	19	0	26	4	370	227	104	755	32	24	152
23828 Branchville	2	1	0	0	4	0	7	0	96	57	24	200	8	6	39
23829 Capron	24	3	2	7	12	0	26	11	719	501	316	1,558	34	21	372
23837 Courtland	35	6	0	9	46	0	65	24	980	459	411	1,881	81	65	420
23844 Drewryville	9	2	0	2	6	0	18	7	234	178	45	357	19	13	75
23851 Franklin	187	37	17	36	176	5	223	107	2,159	2,256	1,236	6,666	303	209	1,706
23866 Ivor	23	3	2	7	12	0	6	10	704	418	187	1,127	48	36	254
23874 Newsoms	13	3	0	5	15	0	13	5	259	188	128	446	23	15	114
23878 Sedley	11	2	3	1	10	0	7	9	328	169	112	519	25	19	123
23898 Zuni	26	3	2	8	11	0	11	7	266	305	158	978	39	29	175

APPENDIX B: Health Status Indicators Data Sources

Profile	Source
Important Note on Data Sources	The data used to produce the health status indicators in this report were obtained from public or commercial sources as indicated throughout this appendix. Community Health Solutions cannot, and does not guarantee the accuracy of these data sources.
1) Mortality Profile (also Appendix A. Maps 1-4)	Community Health Solutions analysis of Virginia Department of Health data (2011-2013). Locality-Level counts and rates were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
2) Maternal and Infant Health Profile (also Appendix A. Maps 5-6)	Community Health Solutions analysis of Virginia Department of Health data (2011-2013). Locality-Level counts and rates were obtained from the Virginia Department of Health. The combined study region counts and rates were produced by Community Health Solutions.
3) Preventable Hospitalization Profile (also Appendix A. Map 7) 4) Behavioral Health Hospitalization Profile (also Appendix A. Map 8)	Community Health Solutions analysis of hospital discharge data from the Virginia Health Information (VHI) 2011-013 datasets and demographic estimates from Alteryx, Inc. (2011-2013). Data include discharges for Virginia residents from Virginia hospitals reporting to Virginia Health Information, Inc.) The analysis includes records of discharges of Virginia residents from Virginia hospitals excluding state and federal facilities. **Preventable Hospitalizations**. The prevention quality indicator (PQI) definitions are based on definitions published by the Agency for Healthcare Research and Quality (AHRQ). The definitions are detailed in their specification of ICD-9 diagnosis codes and procedure codes. Not every hospital admission for congestive heart failure, bacterial pneumonia, etc. is included in the PQI definition; only those meeting the detailed specifications. Low birth weight is one of the PQI indicators, but for the purpose of this report, low birth weight is included in the Maternal and Infant Health Profile. Also, there are four diabetes-related PQI indicators which have been combined into one for the report. Within the Exhibits, the *All PQI Discharges* figures are based on an AHRQ methodology that counts a hospital discharge with multiple PQI diagnoses as one discharge. By comparison, the figures for individual discharges do include a small number of cases in which a single hospital discharge with more than one PQI diagnosis would be counted more than once. Also, AHRQ refined their method to exclude the perforated appendix PQI from its list, but this diagnosis is included in the data used for this study. As a result of these methodological factors, the sum of the individual PQI discharges may be slightly different than the total for All PQI Discharges. These differences or on the order of less than one percent. For more information on the AHRQ methodology, visit the AHRQ website at www.qualityindicators.ahrq.gov/pqi_overview.htm Behavioral Health Hospitalizations- Behavioral health data reported are based on the patient's primary diagnosis. *Figures may under-count behavioral health discharges for the study region because some discharges for residents age 0-17 may not have been reported.* *NOTE: Virginia Health Information (VHI) requires the following statement to be included in all reports utilizing its data: VHI has provided non-confidential patient level information used in this report which was compiled in accordance with Virginia law. VHI has no authority to independently verify this data. By accepting this report the requester agrees to assume all risks that may be associated with or arise from the use of inaccurately submitted data. VHI edits data received and is responsible for the accuracy of assembling this information, but does not represent that the subsequent use of this data was appropriate or endorse or support any conclusions or inferences that may be drawn from the use of this data.*

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

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

Community Insight

The community input strategy for this CHNA was conducted using two methodologies: 1) an online stakeholder survey and 2) a series of more in-depth key informant interviews.

The survey was conducted through Survey Monkey, an online survey service from February 8-19 of 2016. Stakeholders were invited to participate by personal email, and were sent the link to open the survey. Invitations were based on the recipients' employment or community engagement, community history and knowledge. The invitation list was reviewed to ensure that individual participants were included in at least one of these categories: public health and social services, other service providers with reason to be aware of community needs, elected or non-elected government officials, representatives of underserved and/or minority populations, and consumers of services. 103 Invitations were issued, and 13 responded and completed the survey, a 13% response rate. The results of the survey follow. Following the 2016 survey results, the results of the 2013 CHNA survey are compared to the current survey.

The key informant interviews were conducted in March 2016. Thirty to sixty minute interviews were conducted with pulmonary intensivists and representatives of a civic league, rescue squad, and the school system. At each interview, the results of the online survey were presented and discussion focused on the background of each subject matter expert and how that background contributed to the interview. The results of the online survey were also discussed in regards to the subject expert's experience and any areas of community health and need that are necessary but not captured in the survey. The results of the interviews are presented after the survey results.

The results of the 2016 Stakeholder Survey are displayed on the following pages in graph form. The initial question of "what are the most important health needs?" is followed by "what health services need to be strengthened?" The succeeding pages display the results in table format, and the individual, non-structured comments provided by participants. Thirty-five choices were included in the survey; the number of choices each person could select was not restricted or ranked. The 15 most frequently chosen are presented below.

	"Most Important Health Problem in your Community" 2016	% of Respondents Selecting Item
1	Diabetes	83%
2	High Blood Pressure	83%
3	Stroke	83%
4	Alzheimer's Disease	67%
5	Cancer	67%
6	Heart Disease	67%
7	Mental Health Conditions (other than depression)	67%
8	Chronic Pain	58%
9	Respiratory Diseases (other than asthma)	58%
10	Infectious Diseases	50%

11	Adult Obesity	42%
12	Alcohol Use	42%
13	Dental Care/Oral Health-Adult	42%
14	Substance Abuse- Illegal Drugs	42%
15	Asthma	33%

Diabetes, High Blood Pressure and Stroke led the online survey response Stakeholder survey. Alzheimer's Disease, Cancer, Heart Disease and Mental Health Conditions (other than depression) were also very high on the list of the responses from the stakeholders in regards to the most important health problems in our community. These areas of concern do echo the findings from the interviews as well. In the interviews, it was identified that mental health conditions, heart disease, cancer, diabetes and COPD were of major concern for our subject experts. They were also concerned with the healthcare disparities due to financial constraints and the impact that stress, poor diet and busy lifestyle plays into contributing to these conditions. Prevention and education were very important to the subject experts in addition to having access to treating the medical issue.

	"Which Community Health Services Need to be Strengthened" 2016	**% of Respondents Selecting Item**
1	Behavioral Health Services (including mental health, substance use and intellectual disability)	85%
2	Care Coordination and Transitions	62%
3	Long Term Care Services	62%
4	Aging Services	46%
5	Health Care Services for the Uninsured and Underinsured	46%
6	Chronic Pain Management Services	39%
7	Health Care Insurance Coverage (private and government)	39%
8	Homeless Services	39%
9	Patient Self-Management Services (e.g. nutrition, exercise, taking medications)	39%
10	Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	39%
11	Transportation	39%
12	Health Promotion and Prevention Services	31%
13	Home Health Services	31%
14	Cancer Services (screening, diagnosis, treatment)	23%
15	Chronic Disease Services (including screening and early detection)	23%

Behavioral Health Services (including mental health, substance use and intellectual ability) led the list of community health services that need to be strengthened. This finding was also echoed in the key informant interviews. The subject experts stated there needs to be more behavior therapy, counseling, etc. in our area and close follow-up for those who are placed on medications for behavioral health

conditions due to the numerous side effects. Health Care Services for the Uninsured and Underinsured (5) was also reiterated with the interviews and there was a concern amongst those interviewed that those with the fewest monetary resources have less knowledge of the healthcare system and access to the healthcare system. Education and outreach efforts are another area noted in the interviews that our community needs to have strengthened and this is reflected in the key stakeholder survey with Aging Services (4), Chronic Pain Management Services (6), Patient Self-Management Services (9), and Health Promotion and Prevention Services (12).

Two open-ended responses to the choice of Other Community Health Services were related to coordinating service between health care facilities and outpatient alcohol and drug treatment services.

The open-ended question solicited ideas and suggestions for how to improve our services, such as developing an urgent care center in a particular area and communicating the availability of bed capacity to the hospitals in the region.

Comparison to the 2013 survey results:

"Most Important Health Problem in your Community"		
2016 Rank	**2016**	**2013 Rank**
1	Diabetes	**1**
2	High Blood Pressure	**4**
3	Stroke	**8**
4	Alzheimer's Disease	**5**
5	Cancer	**6**
6	Heart Disease	**2**
7	Mental Health Conditions (other than depression)	**9**
8	Chronic Pain	**15**
9	Respiratory Diseases (other than asthma)	**14**
10	Infectious Diseases	**19**
11	Adult Obesity	**3**
12	Alcohol Use	**12**
13	Dental Care/Oral Health-Adult	**28**
14	Substance Abuse- Illegal Drugs	**10**
15	Asthma	**24**

Diabetes remains the number one choice for the respondents for the most important health problem in our community and there were some significant changes between 2013 and 2016 in the rankings as follows:

High Blood Pressure: from 4 to 2
Stroke: from 8 to 3
Heart Disease: from 2 to 6
Chronic Pain: from 15 to 8

Infectious Diseases: from 19 to 10
Dental Care/Oral Health – Adult: from 28 to 13
Asthma: from 24 to 15

2016 Rank	"Which Community Health Services Need to be Strengthened" 2016	2013 Rank
1	Behavioral Health Services (including mental health, substance use and intellectual disability)	2
2	Care Coordination and Transitions	8
3	Long Term Care Services	20
4	Aging Services	5
5	Health Care Services for the Uninsured and Underinsured	No rating
6	Chronic Pain Management Services	11
7	Health Care Insurance Coverage (private and government)	7
8	Homeless Services	1
9	Patient Self-Management Services (e.g. nutrition, exercise, taking medications)	10
10	Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	34
11	Transportation	4
12	Health Promotion and Prevention Services	18
13	Home Health Services	24
14	Cancer Services (screening, diagnosis, treatment)	25
15	Chronic Disease Services (including screening and early detection)	12

The choices included in the 2 surveys were different, with more differentiation in the Health Care Services Coverage areas in 2016. Behavioral Health Services remains high on the list in 2013 and 2016. There were some significant changes between 2013 and 2016 seen in the following rankings:

Care Coordination and Transitions: from 8 to 2
Long Term Services: from 20 to 3
Specialty Medical Care: from 34 to 10
Health Promotion and Prevention Services: from 18 to 12
Home Health Services: from 24 to 13
Cancer Services: from 25 to 14

Community Stakeholder Survey Results 2016: The Most Important Health Challenges in the Community				
ALPHABETICAL	**%**		**BY SELECTION**	**%**
Adult Obesity	42%	**1**	Diabetes	83%
Alcohol Use	42%	**2**	High Blood Pressure	83%
Alzheimer's Disease	67%	**3**	Stroke	83%
Arthritis	25%	**4**	Alzheimer's Disease	67%
Asthma	33%	**5**	Cancer	67%
Autism	17%	**6**	Heart Disease	67%
Cancer	67%	**7**	Mental Health Conditions (other than depression)	67%
Childhood Obesity	17%	**8**	Chronic Pain	58%
Chronic Pain	58%	**9**	Respiratory Diseases (other than asthma)	58%
Dental Care/Oral Health-Adult	42%	**10**	Infectious Diseases	50%
Dental Care/Oral Health-Pediatric	25%	**11**	Adult Obesity	42%
Depression	33%	**12**	Alcohol Use	42%
Diabetes	83%	**13**	Dental Care/Oral Health-Adult	42%
Domestic Violence	17%	**14**	Substance Abuse- Illegal Drugs	42%
Environmental Quality	8%	**15**	Asthma	33%
Heart Disease	67%	**16**	Depression	33%
High Blood Pressure	83%	**17**	Injuries	33%
HIV/AIDS	0%	**18**	Orthopedic Problems	33%
Infant and Child Health	17%	**19**	Physical Disabilities	33%
Infectious Diseases	50%	**20**	Substance Abuse- Prescription Drugs	33%
Injuries	33%	**21**	Arthritis	25%
Intellectual/Developmental Disabilities	8%	**22**	Dental Care/Oral Health-Pediatric	25%
Mental Health Conditions (other than depression)	67%	**23**	Neurological Disorders (seizures, multiple sclerosis)	25%
Neurological Disorders (seizures, multiple sclerosis)	25%	**24**	Tobacco Use	25%
Orthopedic Problems	33%	**25**	Autism	17%
Physical Disabilities	33%	**26**	Childhood Obesity	17%
Prenatal & Pregnancy Care	17%	**27**	Domestic Violence	17%
Renal (kidney) Disease	17%	**28**	Infant and Child Health	17%
Respiratory Diseases (other than asthma)	58%	**29**	Prenatal & Pregnancy Care	17%
Sexually Transmitted Diseases	8%	**30**	Renal (kidney) Disease	17%
Stroke	83%	**31**	Environmental Quality	8%
Substance Abuse- Illegal Drugs	42%	**32**	Intellectual/Developmental Disabilities	8%
Substance Abuse- Prescription Drugs	33%	**33**	Sexually Transmitted Diseases	8%
Teen Pregnancy	0%	**34**	HIV/AIDS	0%
Tobacco Use	25%	**35**	Teen Pregnancy	0%
Other Health Problems (list in box below)	0%	**36**	Other Health Problems (list in box below)	0%

Community Stakeholder Survey Results 2016: Community Health Services that Need Strengthening				
ALPHABETICAL	**%**		**BY SELECTION**	**%**
Aging Services	46%	**1**	Behavioral Health Services (including mental health, substance use and intellectual disability)	85%
Behavioral Health Services (including mental health, substance	85%	**2**	Care Coordination and Transitions	62%
Cancer Services (screening, diagnosis, treatment)	23%	**3**	Long Term Care Services	62%
Care Coordination and Transitions	62%	**4**	Aging Services	46%
Chronic Pain Management Services	39%	**5**	Health Care Services for the Uninsured and Underinsured	46%
Chronic Disease Services (including screening and early detection)	23%	**6**	Chronic Pain Management Services	39%
Dental Care/Oral Health Services- Adult	23%	**7**	Health Care Insurance Coverage (private and government)	39%
Dental Care/Oral Health Services- Pediatric	23%	**8**	Homeless Services	39%
Domestic Violence Services	8%	**9**	Patient Self Management Services (e.g. nutrition, exercise, taking medications)	39%
Early Intervention Services for Children	8%	**10**	Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	39%
Environmental Health Services	8%	**11**	Transportation	39%
Family Planning Services	15%	**12**	Health Promotion and Prevention Services	31%
Food Safety Net (food bank, community gardens)	23%	**13**	Home Health Services	31%
Health Care Insurance Coverage (private and government)	39%	**14**	Cancer Services (screening, diagnosis, treatment)	23%
Health Promotion and Prevention Services	31%	**15**	Chronic Disease Services (including screening and early	23%
Health Care Services for the Uninsured and Underinsured	46%	**16**	Dental Care/Oral Health Services- Adult	23%
Home Health Services	31%	**17**	Dental Care/Oral Health Services- Pediatric	23%
Homeless Services	39%	**18**	Food Safety Net (food bank, community gardens)	23%
Hospice Services	23%	**19**	Hospice Services	23%
Hospital Services (including emergency, inpatient and outpatient)	8%	**20**	Pharmacy Services	23%
Job/Vocational Retraining	15%	**21**	Services for Family Caregivers	23%
Long Term Care Services	62%	**22**	Social Services	23%
Maternal, Infant & Child Health Services	0%	**23**	Family Planning Services	15%
Patient Self Management Services (e.g. nutrition, exercise, taking medications)	39%	**24**	Job/Vocational Retraining	15%
Pharmacy Services	23%	**25**	Primary Health Care Services	15%
Physical Rehabilitation	8%	**26**	Domestic Violence Services	8%
Primary Health Care Services	15%	**27**	Early Intervention Services for Children	8%
Public Health Services	8%	**28**	Environmental Health Services	8%
School Health Services	8%	**29**	Hospital Services (including emergency, inpatient and outpatient)	8%
Services for Family Caregivers	23%	**30**	Physical Rehabilitation	8%
Social Services	23%	**31**	Public Health Services	8%
Specialty Medical Care (e.g. cardiologists, oncologists, etc.)	39%	**32**	School Health Services	8%
Transportation	39%	**33**	Workplace Health and Safety Services	8%
Workplace Health and Safety Services	8%	**34**	Maternal, Infant & Child Health Services	0%
Other Community Health Services (list in box below)	0%	**35**	Other Community Health Services (list in box below)	0%
			With penalties on readmission, coordinating services between health care facilities will be paramount.	
			Outpatient Alcohol and drug treatment services	

V. APPENDIX

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

Hospital for Extended Recovery Community Health Needs Assessment Implementation Plan 2013—2016

Introduction

The Hospital for Extended Recovery is a 35-bed long term acute care hospital located inside Sentara Norfolk General Hospital. The hospital opened November 2001 and was the first hospital within a hospital in the state of Virginia. This 35-bed specialty facility is an acute care hospital specifically designed for patients with medically complex needs who need to stay in an acute care setting on average of three to four weeks. Though located within Sentara Norfolk General Hospital, the Hospital for Extended Recovery is actually a separate health facility. The proximity to and affiliation with Sentara, however, assures you that if needs change, the benefits of a Level 1 Trauma Center are easily accessible.

The mission of the Hospital for Extended Recovery (HER) is "to improve health every day." With this mission in mind, HER commissioned Community Health Solutions to conduct a community health needs assessment. This 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.

Service Area Description/Determination of Community

The study focused on eight localities identified by HER as its study region: the cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk and Virginia Beach; and the counties of Isle of Wight and Southampton. The study region is shown in the map below. The results of the study include two primary components: a 'community insight profile' based on qualitative analysis of a survey of community stakeholders, and a 'community indicator profile' based on quantitative analysis of community health status indicators.

Summary of Community Health Needs Assessment (CHNA)

The objective of the CHNA was to: 1) Identify important health concerns in the community; 2) Identify significant service gaps in the community; 3) Further identify additional ideas or suggestions for improving community health.

When examining the quantitative findings with those of the qualitative data, a consolidated list of priority health needs of the HER community was compiled and is shown in part below.

Important Health Concerns Identified (top ten)

1. Diabetes
2. Heart Disease
3. Adult Obesity
4. High Blood Pressure
5. Alzheimer's Disease
6. Cancer
7. Dementia
8. Stroke
9. Mental Health Conditions
10. Substance Abuse (Illegal Drugs)

Important Community Service Gaps (top ten)

1. Homeless Services
2. Behavioral Health Services (including mental health, substance use and intellectual disability)
3. Adult Day Care Services
4. Transportation
5. Aging Services
6. Community Services for the Elderly
7. Health Care Coverage
8. Care Coordination Services
9. Caregiver Education Support
10. Patient Self-Management Services

Criteria Determining Needs to be Addressed

Looking at factors such as size and scope of the health problem, the intensity and severity of the issue, the potential to effectively address the problem, and the availability of community resources, we have identified these priority health problems in our community. (Only 5 were chosen due to resource constraints.)

1. Diabetes
2. Heart Disease/High Blood Pressure/Congestive Heart Failure (CHF)
3. Obesity
4. Behavioral Health
5. Caregiver Support

CHNA Implementation Strategies

The CHNA is the foundation for a hospital implementation strategy to address these priority needs.

Health Need	Three Year Implementation Strategies
Diabetes	➢ Train our own nurse as a diabetes resource associate who will assist in education of our patients on diabetes and managing it at home. She will also do staff education so they can better assist our diabetic patients ➢ Provide education on diabetes in conjunction with diabetes educators ➢ Post and distribute nutritional flyers for healthy eating habits for diabetics ➢ Participate in screenings in conjunction with EMVS medical students for diabetes and other diseases. ➢ Research resources in our area for our diabetic patients and provide information to patients and families ➢ Promote awareness of individual sessions and group sessions for diabetics at Sentara Norfolk General Hospital ➢ Arrange for home health to follow our patients discharged home with Diabetes ➢ Promote awareness of Sentara's Diabetes Home Care program ➢ Participate in Diabetes month in conjunction with Sentara

Health Need	Three Year Implementation Strategies
Heart Disease/High Blood Pressure/CHF	➢ Make sure appropriate education is given to patients discharged home with heart disease, high blood pressure and/or CHF ➢ Arrange for home health to follow patients discharged home with heart disease to monitor blood pressure and signs of CHF ➢ Participate in blood pressure screenings in conjunction with EVMS medical students ➢ Sponsor a booth and display educational fliers on blood pressure, nutrition, sodium intake and exercise at the heart walk ➢ Educate staff on heart healthy practices ➢ Participate in the American Heart Association Heart walk
Obesity	➢ Promote awareness of Sentara's fitness programs to employees and the community ➢ Provide education to the patients and families on healthy eating habits by giving them printed materials on nutritious meals at time of discharge ➢ Participate in screenings in conjunction with EVMS for weight and BMI index ➢ Encourage employees interested in losing weight to join weight watchers at work through Sentara Healthy Edge ➢ Promote awareness of Sentara Norfolk General's walking route within the hospital
Behavioral Health	➢ Provide information to patients and families on behavioral health resources available in the community ➢ Have our social worker meet with families of our patients that have dementia and go over caregiver support and resources available in the community ➢ Encourage our employees to take advantage of Sentara's EAP program when dealing with personal mental health issues.
Caregiver support	➢ Research resources in the community for support for caregivers ➢ Promote awareness of various resources for caregiver support to family members caring for loved ones needing 24/7 care ➢ Work with home health agencies to get assistance in the home to help care for patients living at home that need 24/7 care ➢ Put together a caregiver resource booklet and have it available in Hospital for Extended Recovery's patient visitor waiting area.

Additional Investments

A number of resources are available in the community to address these needs. Sentara Healthcare, the organization 501(c)(3) sole member, provides a number of programs to promote health. Together, we will work to improve the health of the communities we serve.