Suffolk County

Community Health Assessment 2014-2017

Steven Bellone
Suffolk County Executive

James L. Tomarken, MD, MPH, MBA, MSW
Commissioner of Health

Suffolk County Department of Health Services
3500 Sunrise Highway, Suite 124
P.O. Box 9006
Great River, NY 11739-9006
Main (631) 854-0100
scdhsweb@suffolkcountyny.gov

SUFFOLK COUNTY
COMMUNITY HEALTH ASSESSMENT 2014-2017

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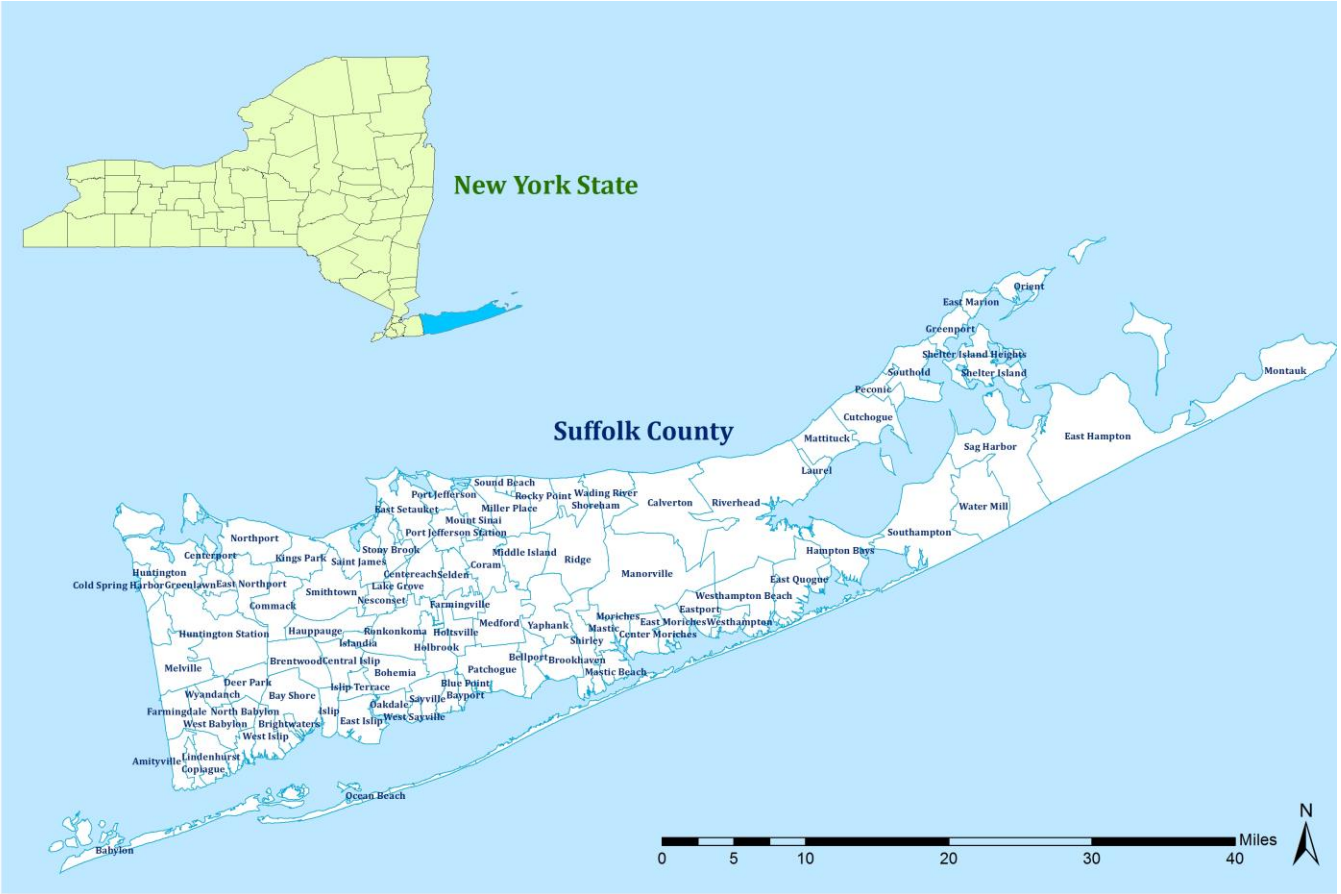

New York State
Suffolk County
Orient
East Marion
Greenport
Shelter Island Heights
Southold
Shelter Island
Montauk
Peconic
Cutchogue
Mattituck
Sag Harbor
East Hampton
Laurel
Sound Beach
Port Jefferson
Rocky Point
Wading River
Shoreham
Calverton
Riverhead
East Setauket
Miller Place
Mount Sinai
Port Jefferson Station
Water Mill
Southampton
Northport
Centerport
Kings Park
Saint James
Stony Brook
Middle Island
Ridge
Hampton Bays
Huntington
Cold Spring Harbor
Greenlawn
East Northport
Smithtown
Centereach
Selden
Coram
Manorville
East Quogue
Commack
Lake Grove
Nesconset
Farmingville
Westhampton Beach
Eastport
Huntington Station
Hauppauge
Ronkonkoma
Holtsville
Medford
Yaphank
Moriches
Mastic
East Moriches
Westhampton
Center Moriches
Islandia
Holbrook
Shirley
Melville
Brentwood
Central Islip
Bellport
Brookhaven
Bohemia
Patchogue
Mastic Beach
Deer Park
Islip Terrace
Blue Point
Wyandanch
Bay Shore
Sayville
Bayport
Farmingdale
North Babylon
Islip
Oakdale
West Babylon
Brightwaters
West Sayville
East Islip
West Islip
Amityville
Lindenhurst
Copiague
Ocean Beach
Babylon
0
5
10
20
30
40
Miles
N

SECTION ONE – Description of the Community

A. DEMOGRAPHICS, MORBIDITY, AND MORTALITY

Age and Gender

Suffolk County, occupying the eastern end of Long Island, has a land area of 912.2 square miles. Using 2012 Population Estimates from 2010 U.S. Census Demographic Profile data, the total population of Suffolk County is estimated to be 1,499,273. The median age of the population is 41.9 years, with 23.1% of the population below the age of 18. Of the 1,153,368 residents aged 18 and older, 48.6% are male and 51.4% are female. Seniors aged 65 and older make up 14.5% of the population, with 42.8% males and 57.2% females. Children under the age of five make up 5.6% of the population. Figure 1 displays the age distribution of Suffolk County.

Racial and Ethnic Composition

According to 2012 Population Estimates from 2010 U.S. Census Demographic Profile data, 87.2% of the population is white, 9.1% is African American/black, 17.8% Hispanic/Latino, 4.3% is Asian, and 1.1% is American Indian and Alaskan Native (note: these figures take combinations of races into account). Figure 2 depicts the change in the racial and ethnic make-up of the population since 2007. Suffolk County is also home to two Indian reservations, the Shinnecock Reservation in Southampton as well as the Poospatuck Reservation, Unkechaug Nation in Shirley.

Based on 5-year estimates from the 2007-2011 American Community Survey

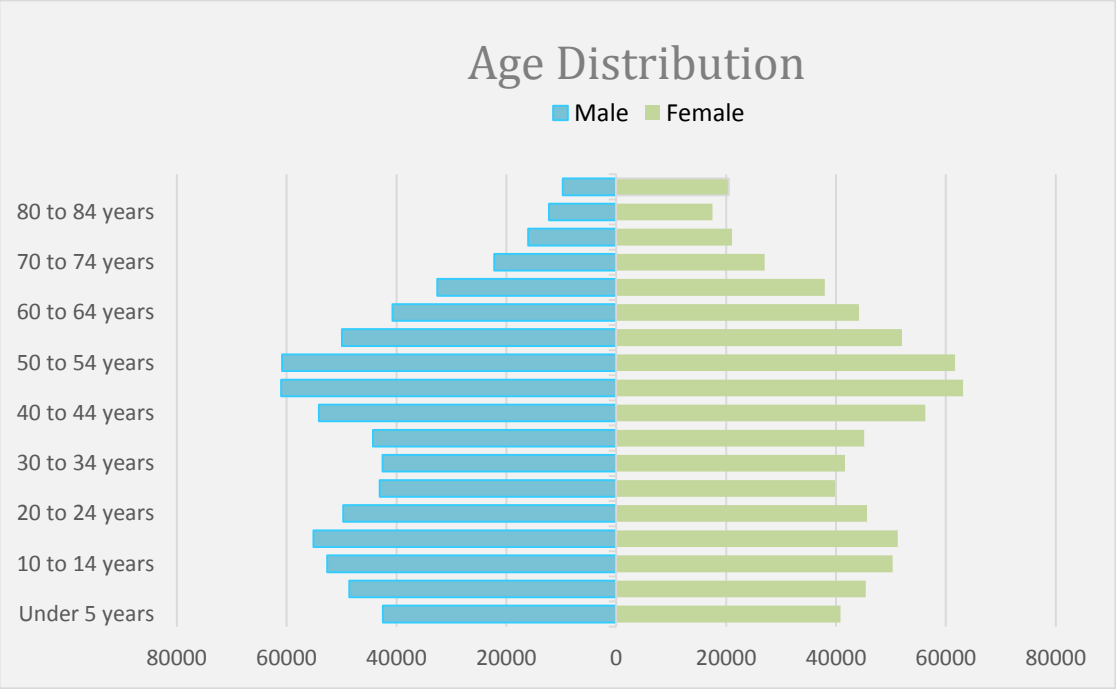


Figure 1. Age Distribution of Suffolk County by gender.
Source: U.S. Census 2012 Population Estimates

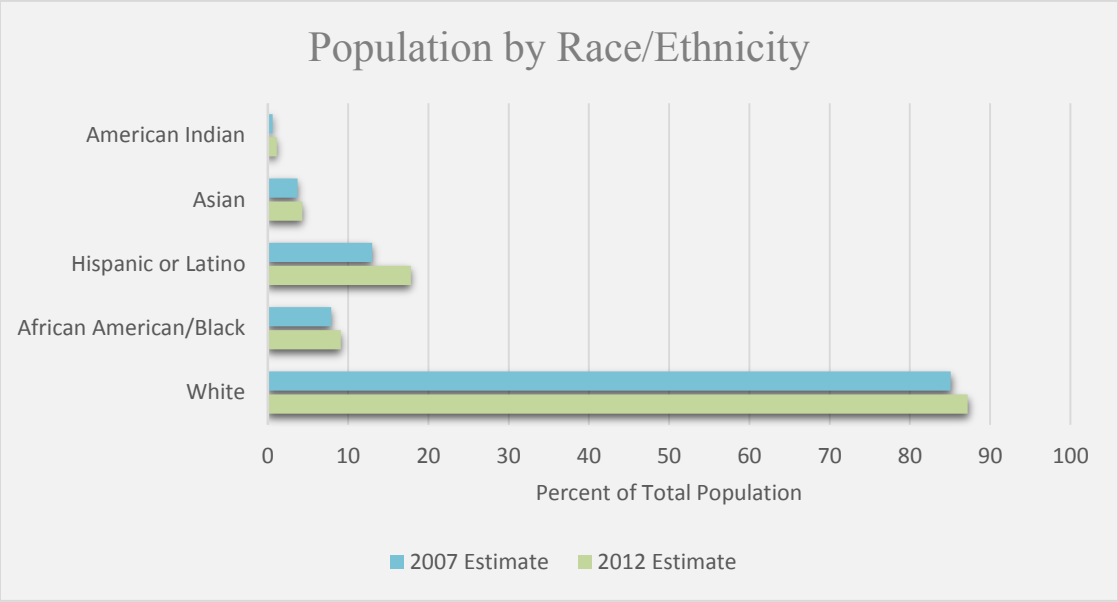


Figure 2. Racial and Ethnic composition of Suffolk County. Note that combinations of races are taken into account.
Source: ACS 2007 Estimates; U.S. Census 2012 Population Estimates

(ACS) conducted by the U.S. Census Bureau, the median age for whites is 41.4 years. For African Americans/blacks it is 32.4, and for Hispanics it is 29.1. The population under age 5 makes up 5.3% of whites, 6.6% of African Americans/blacks, and 9.6% of Hispanics. The population aged 65 and older makes up 4.8% of whites, 8.4% of African Americans/blacks and 4.6 % of Hispanics.

Figure 3 details the stark differences in age characteristics by race.

From the 2011 ACS, it is estimated that 14.2% of Suffolk's population is foreign-born, with most hailing from Latin America (56.8%), Asia (20.1%), and Europe (19.7%) (Figure 4). Among the Asian immigrants, about two-thirds originate from either China or India. Thirty-six percent of the

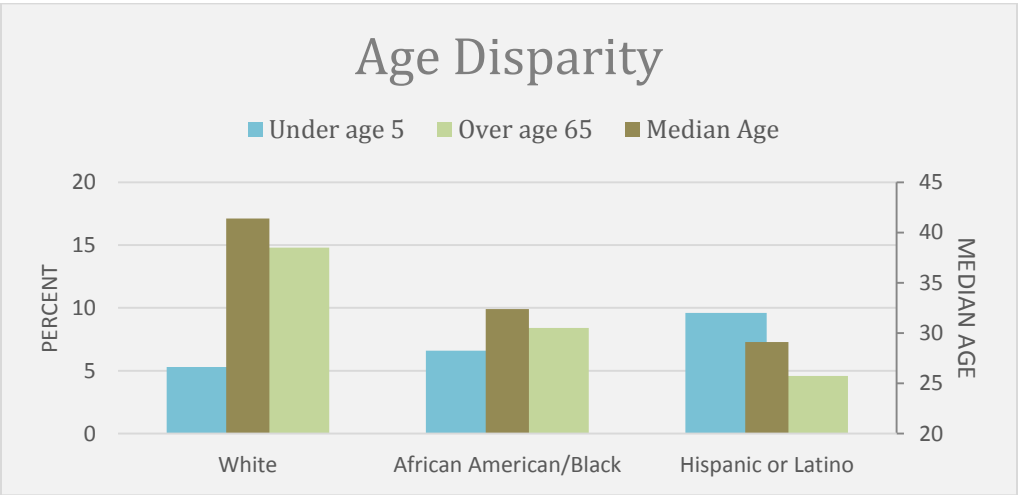


Figure 3. Age disparity by race/ethnicity in Suffolk County. Source: ACS 2011 5-year estimates

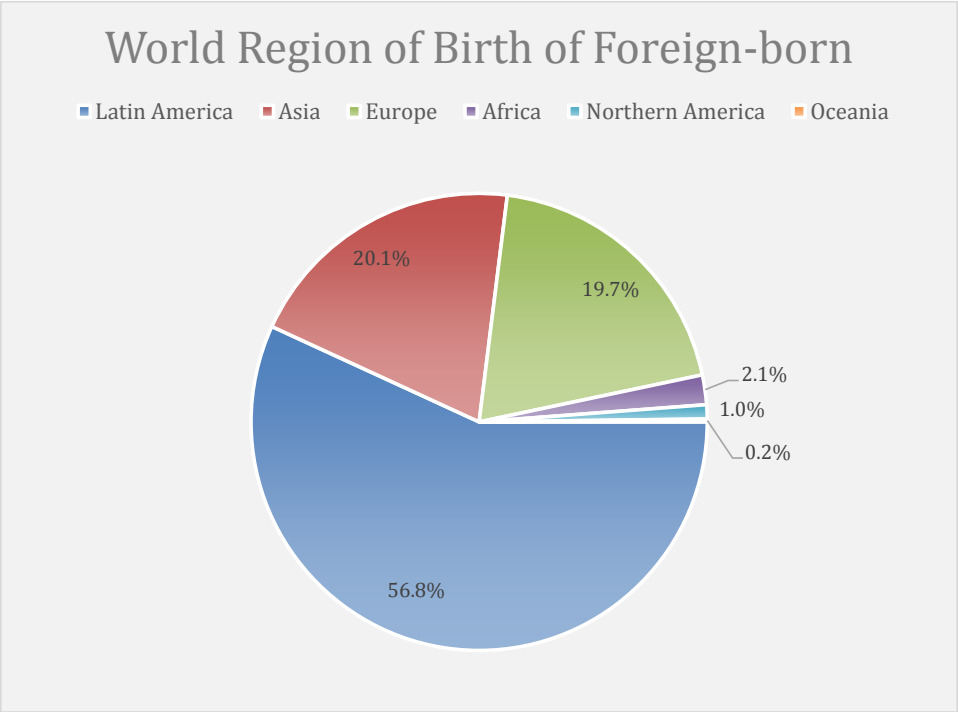


Figure 4. World Region of Birth of Foreign-born in Suffolk County.
Source: ACS 2011 5-year estimates

Hispanic/Latino population is foreign born, most commonly from El-Salvador, Dominican Republic, and Ecuador. Twenty percent of the Native American/Alaska native population is foreign born, the majority of whom immigrated from Latin America. Among black immigrants, most come from the Caribbean (specifically Haiti and Jamaica). About 9% of the white population of Suffolk is foreign born, with most coming from Latin America (most notably El-Salvador and Colombia).

About 7.3% of Suffolk County residents are not U.S. citizens, and 6.9% are naturalized. Among people at least five years old in Suffolk County, 21% spoke a language other than English at home, where 60% spoke Spanish and 40% spoke some other language. Of those who spoke another language than English at home, 43% reported that they did not speak English "very well."

Households

From the 2011 ACS, the average household size was estimated at 2.93. Among whites it was 2.78, among African Americans/blacks it was 3.38, and among Hispanics/Latinos it was 4.35 (Figure 5). For the population aged fifteen and over, married but not separated accounts for 55.9% of the population— 55.8% amongst whites, 38.3% amongst African Americans/blacks and 46.1% amongst Hispanics/Latinos. Female head of household with no husband present and children under the age of 18 represents 4.4% of whites, 16.8% of blacks, and 13.1% of Hispanics.

Figure 5A displays the average household size by zip code in Suffolk County, where the darker colors indicate a higher estimated average household size. According

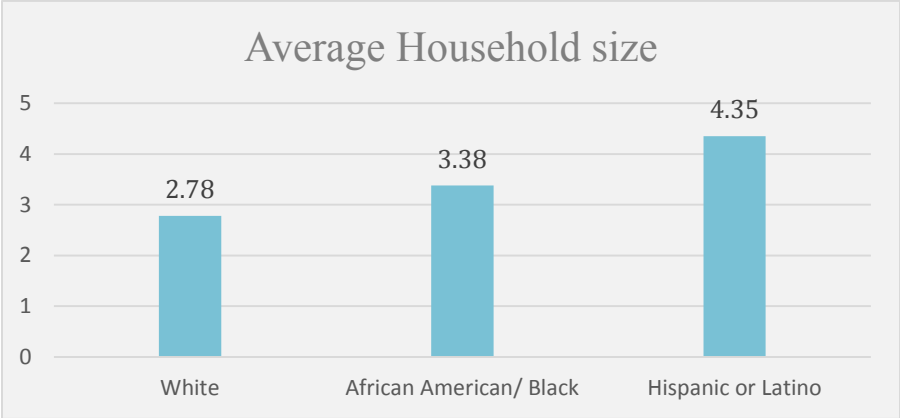


Figure 5. Average household size by race/ethnicity in Suffolk County.
Source: ACS 2011 5-year estimate

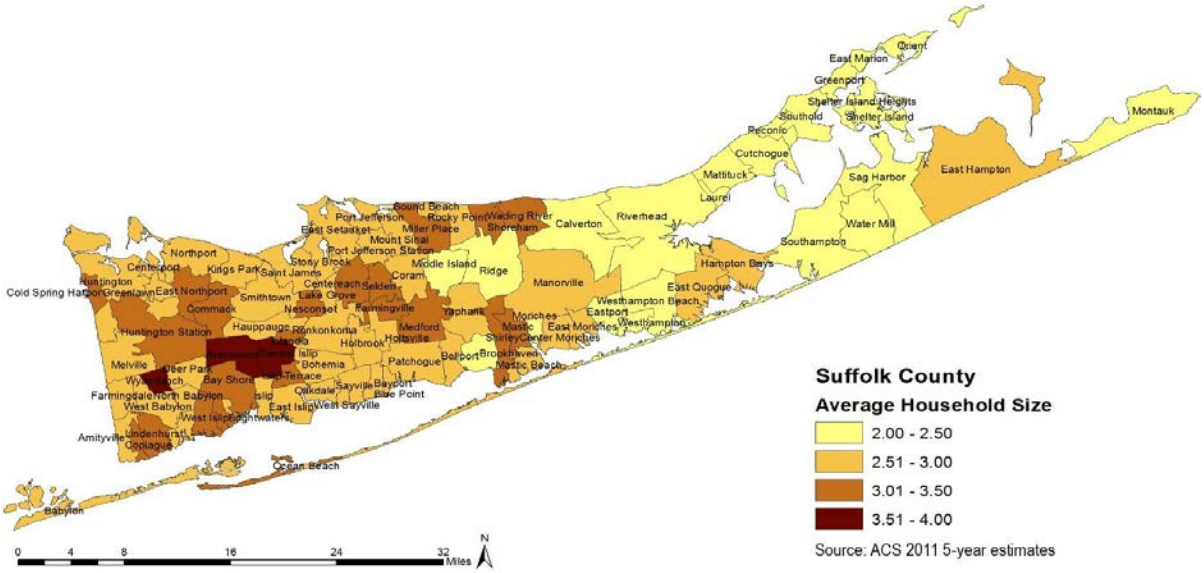


Figure 5A. Average household size by zip code in Suffolk County.

to 2011 ACS 5-year estimates, Brentwood (3.99), Wyandanch (3.78), and Central Islip (3.69) have the largest average household sizes in Suffolk, while Moriches (2.00), Montauk (2.04), and Shelter Island (2.11) have the lowest average household size

Educational Attainment

Of the population 25 years of age or older, 90.0% have attained a high school diploma or higher. Those who have not graduated from high school make up 10.0% of the total population. However, broken down by race: of all white Suffolk residents, only 7.8% have not graduated from high school, while 15.5% of African

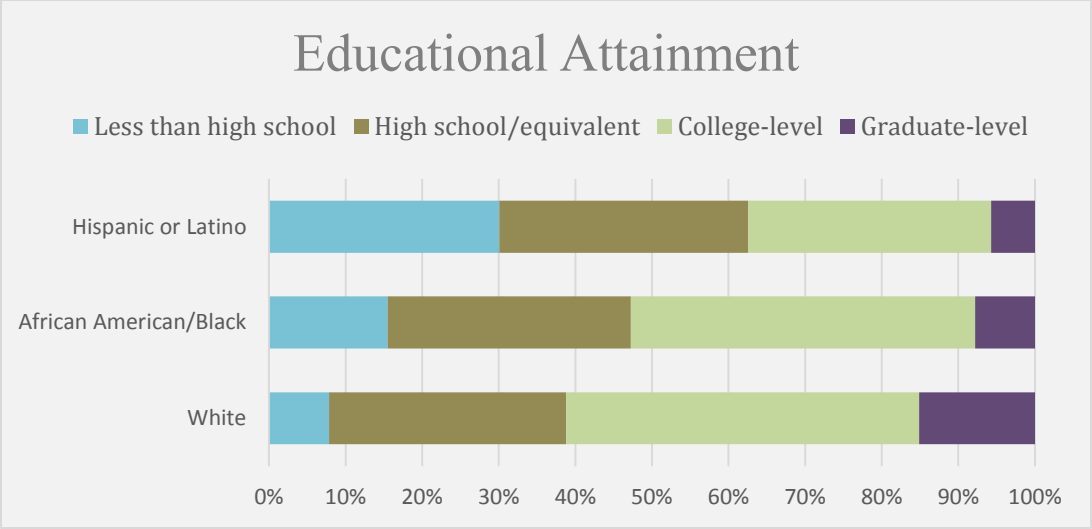


Figure 6. Educational attainment by race/ethnicity in Suffolk County.
Source: ACS 2011 5-year estimates

American/blacks have not graduated from high school and 30.1% of Hispanics/Latinos have not graduated from high school. High school graduates including equivalency, make up 30.4% of the Suffolk population—31.0% of the white population, 31.7% of the African American/black population, and 32.5% of the Hispanic/Latino population. Persons with a bachelor's degree or higher make up an additional 32.9% of the Suffolk population: 33.4% of whites, 22.4% of African Americans/blacks, and 15.1% of Hispanics/Latinos. All levels of educational attainment are described in Figure 6.

Figure 6A shows the proportion of Suffolk County adults who have graduated from high school in each zip code, where the

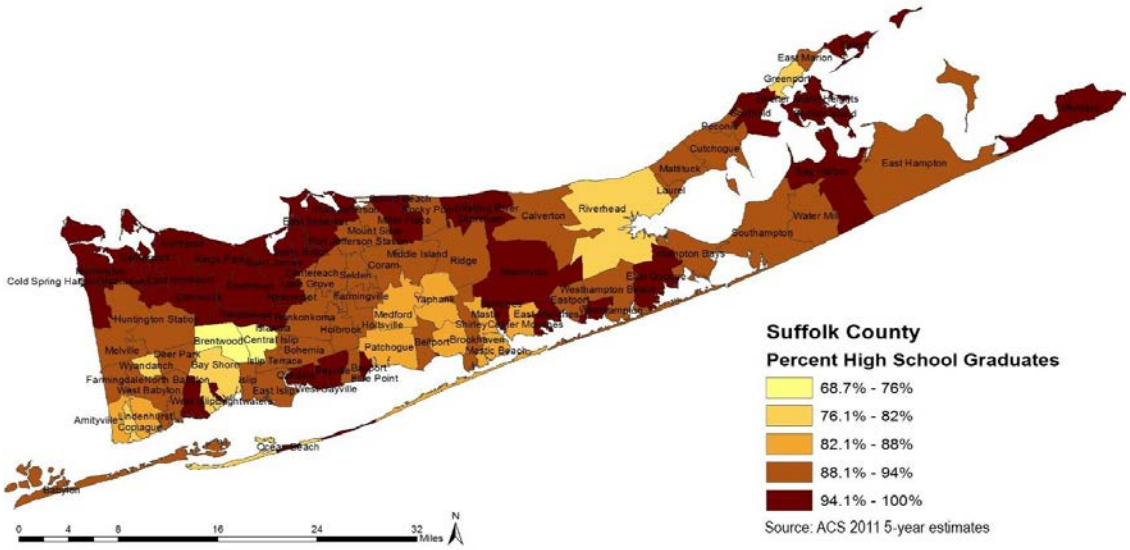


Figure 6A. Percentage of adults who have graduated from high school by zip code in Suffolk County.

darker regions indicate a higher percentage. The areas with the under 80% of high school graduates include: Brentwood (68.7%), Central Islip (72.0%), Copiague (77.3%), Wyandanch (79.2%), and Riverhead (79.3%).

Health Insurance

Among the civilian non-institutionalized population in Suffolk County, 89.7% have health insurance coverage—91.8% of whites, 86.7% of African Americans/blacks, and 74.2% of Hispanics/Latinos. For those under 18 years of age, 4.6% of the total population had no health insurance coverage (3.4% of whites, 8.2% of African Americans/blacks, and 7.7% of Hispanics/Latinos). For those between 18 and 64 years of age, 14.5% of the total population are uninsured. 11.8% of adult whites, 17.2% of African Americans/blacks, and 36.1% of Hispanics/Latinos are uninsured (Figure 7). Of those who are under twice the poverty threshold, a staggering 44.5% are uninsured. Furthermore, of those who are uninsured, 40.9% are foreign-born and 31.5% of uninsured are not U.S. citizens

Disability

Data on disability from the American Community Survey covered six disability types: (1) hearing difficulty (deaf or having serious difficulty hearing); (2) vision difficulty (blind or having serious difficulty seeing, even when wearing glasses); (3) cognitive difficulty (having difficulty remembering, concentrating, or making decisions due to a physical, mental, or emotional problem); (4) ambulatory difficulty (having serious difficulty walking or climbing stairs); (5) self-care difficulty (having difficulty bathing or dressing); and (6) independent living difficulty (having difficulty doing errands alone such as visiting a doctor's office or shopping due to a physical, mental, or emotional problem). Respondents who reported any of the six disability types are considered to have a disability.

The disabled population represents 6.8% of those between the ages of 18 and 64: 6.6% of whites, 10.4% of African Americans/blacks, and 5.6% of Hispanics/Latinos. For children under 18 ...

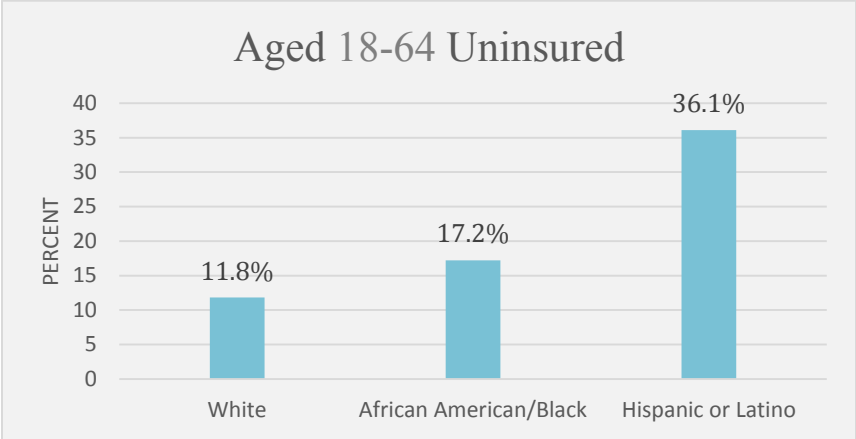


Figure 7. Health insurance coverage status for those aged 18-64 by race/ethnicity in Suffolk County. Source: ACS 2011 3-year estimates

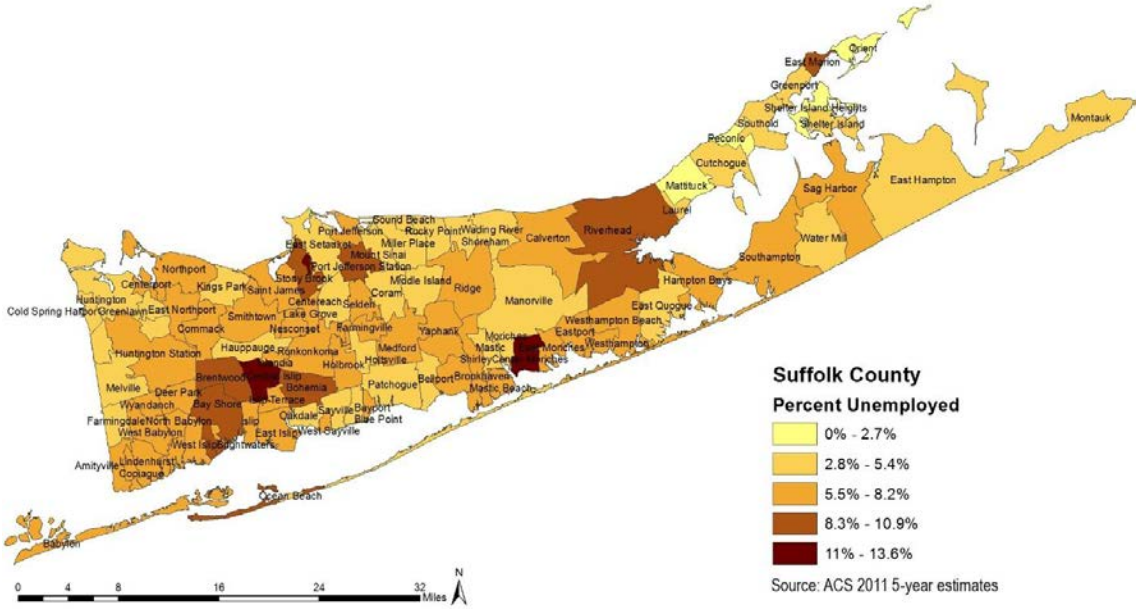


Figure 8A. Percent unemployed by zip code in Suffolk County.

years of age, 3.4% are disabled: 2.5% of whites, 4.3% of African Americans/blacks, and 2.5% of Hispanics/Latinos. Among those who are older than 64, a larger portion of 29.5% are disabled (29.3% of whites, 34.4% of African Americans/blacks, and 27.7% of Hispanics/Latinos).

Employment, Income and Poverty

According to the 2011 ACS, the unemployment rate in Suffolk for those aged 16 and older was 6.4% countywide: 6.1% for whites, 9.8% for African Americans, and 8.1% for Hispanics.

Figure 8A describes the unemployment rate for each zip code area in Suffolk County, where the darker areas indicate a higher proportion of unemployed adults. The three areas with above 10% unemployment are Stony Brook (zip code 11794, 13.6%), Center Moriches (13.5%), and Central Islip (11.1%).

Median household income in 2011 was $87,187 (± $812, margin of error). By race, the median household incomes were $89,877 (± $752) for whites, $70,024 for African Americans/blacks (± $3,538), $70,342 (± $1,950) for Hispanics/Latinos, $92,893 (± $5,077) for Asians, $56,875 (± $15,898) for American Indians/Alaskan Natives, and $62,143 (± $3,734) for those listed as other (Figure 8).

Figure 8B depicts median household income by zip code area in Suffolk County, where the darker colors indicate areas with a higher median household income. The regions with the lowest median household incomes are Greenport ($51,305), Ridge

($53,092), and Riverhead ($53,438).

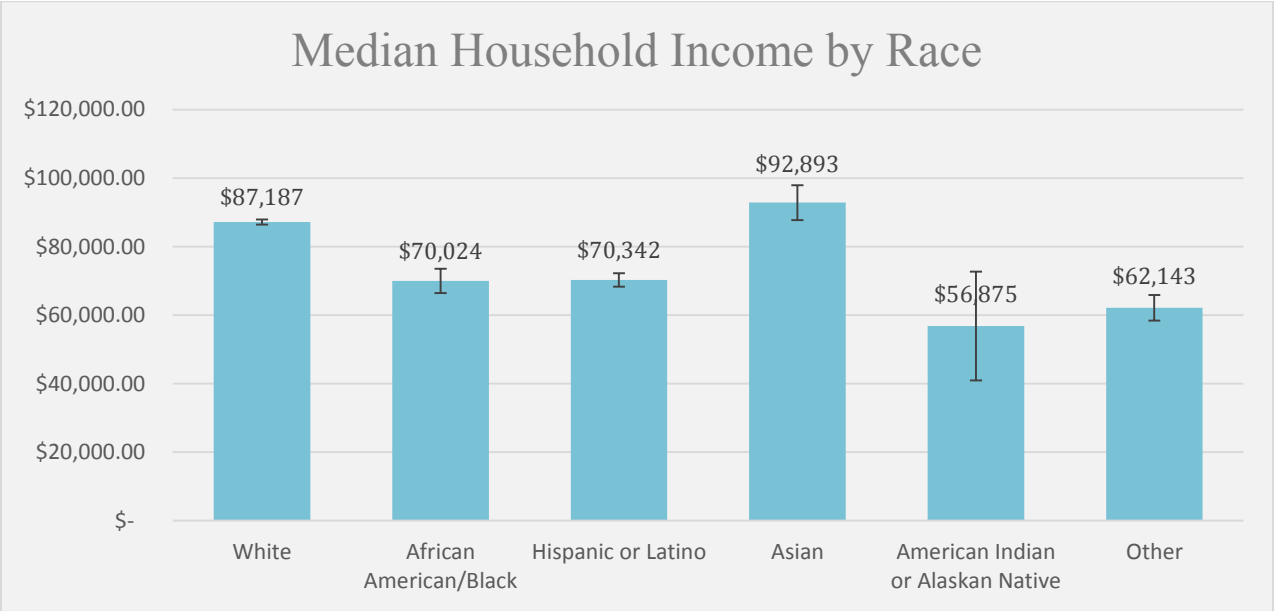


Figure 8. Median household income by race/ethnicity in Suffolk County. The error bars represent the margin of error. Source: ACS 2011 3-year estimates

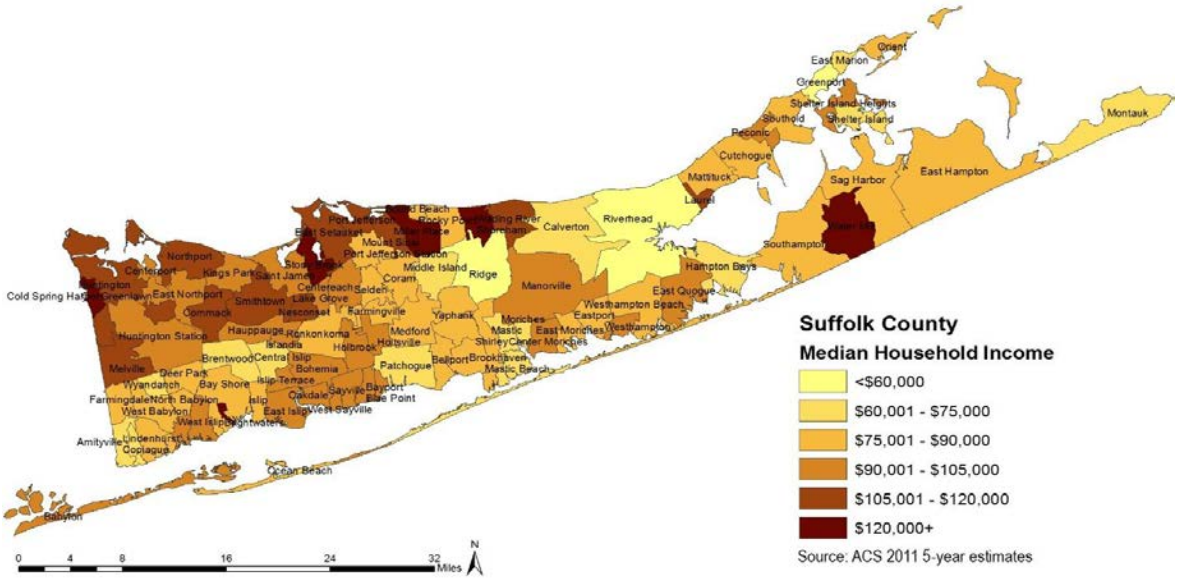


Figure 8B. Median household income by zip code in Suffolk County.

The percent of households with Supplemental Security Income was 2.7% for Suffolk in its entirety: 2.5% for whites, 5.7% for African Americans/blacks, and 4.3% for Hispanics/Latinos. Public assistance income within the population was: 1.1% for

Suffolk: 0.8% for whites, 4.2% for African Americans/blacks, and 2.1% for Hispanics/Latinos. Social Security income is distributed to 30.4% of the total population: 31.8% of whites, 25.7% of African Americans/blacks, and 16.6% of Hispanics/Latinos.

About 5.7% of Suffolk County residents are below the poverty level (4.7% of whites, 11.5% of African Americans/blacks, and 10.5% of Hispanics/Latinos). Poverty percentages among residents between the ages of 18 and 64 were 5.4%: for whites it was 4.5%, for African Americans/blacks it was 9.9%, and for Hispanics/Latinos it was 9.5%. For those under age 18, the Suffolk poverty rate was 6.7% (4.9% of whites, 15.7% of African Americans/blacks, and 12.5% of Hispanics/Latinos).

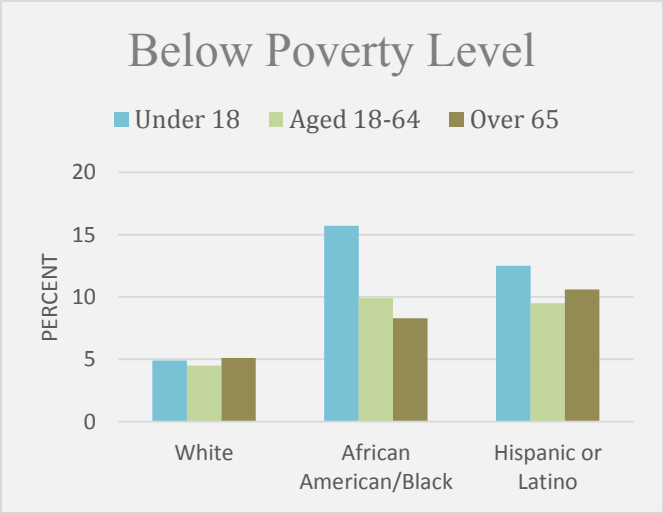


Figure 9. Below poverty level by age group and by race/ethnicity in Suffolk County.
Source: ACS 2011 5-year estimates

For those 65 and older, the Suffolk poverty rate was 5.5% (5.1% of whites, 8.3% of African Americans/blacks, and 10.6% of Hispanics/Latinos).

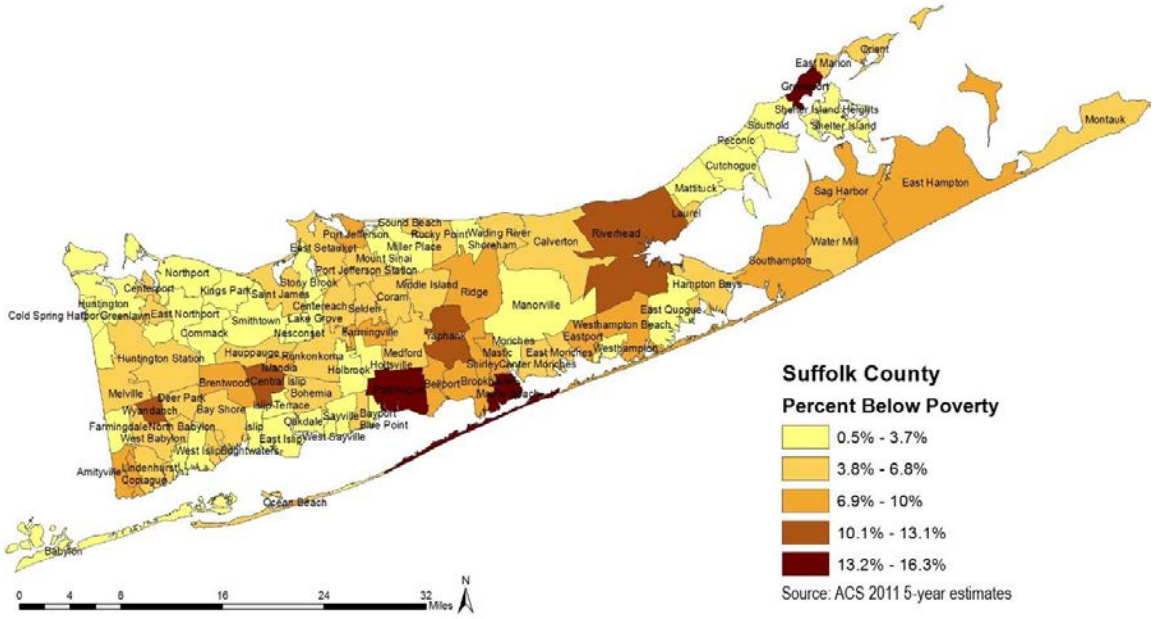


Figure 9A. Below poverty level by zip code in Suffolk County

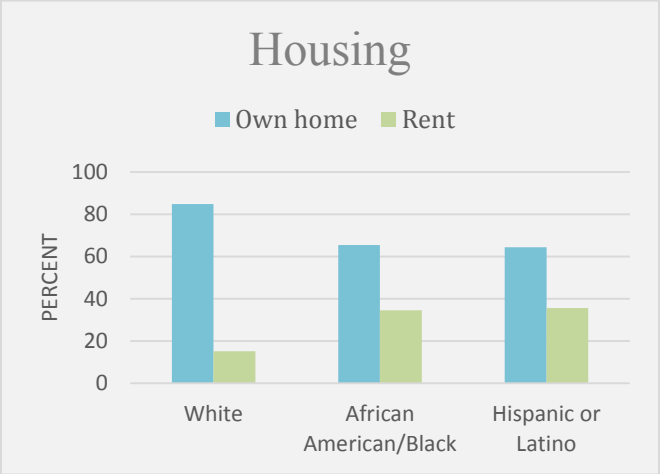


Figure 10. Housing tenure by race/ethnicity in Suffolk County.
Source: ACS 2011 5-year estimates

Figure 9 displays the percent of the population below the poverty level by age group.

Female-headed households with children under the age of 18 had a poverty rate of 17.6% (8.8% of whites, 17.7% of African Americans/blacks, and 20.6% among Hispanics/Latinos). About 4.1% of all households in Suffolk County receive food stamps/SNAP, where 46.8% of those receiving assistance are white, 22.4% are African American/black and 26.1% are Hispanic/Latino.

Figure 9A displays the percent below the poverty level by zip code, with the darker regions indicating a higher rate of poverty. The areas with the highest rates of poverty are Greenport (16.3%), Patchogue (15.4%), and Mastic Beach (13.6%).

Housing

Owner-occupied housing makes up 80.8% of the housing stock in Suffolk, and renters represent 19.2%. For whites, owners represent 84.8%, renters represent 15.2% of the total. Among African Americans/blacks, owners make up 65.4%, renters represent 34.6%. Hispanic/Latino owners make up 64.4% and renters make up 35.6% (Figure 10).

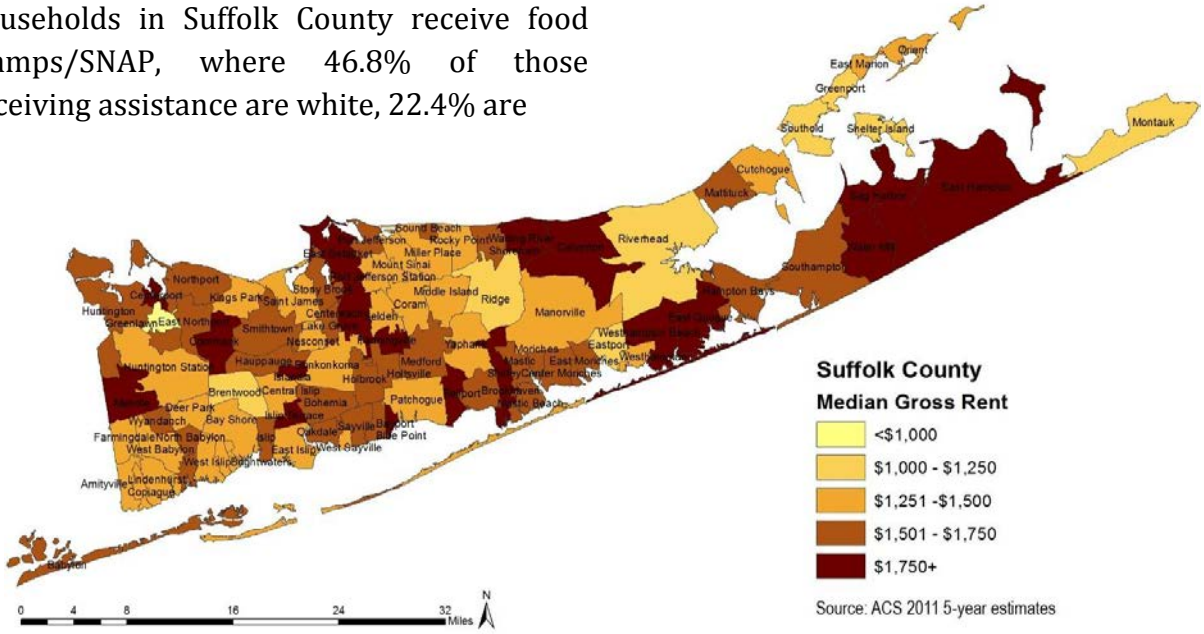


Figure 10A. Median Gross Rent by Zip Code in Suffolk County.
Source: ACS 2011 5-year estimates

Average household size for owners is 3.03 and 2.51 for renters. Among whites it is 2.90 for owners, 2.27 for renters. For African Americans/blacks it is 3.64 for owners and 2.97 for renters, and for Hispanics/Latinos, owner household size is 4.62 and renter size is 3.93.

Figure 10A depicts the median gross rent across Suffolk County. The cost of renting in Suffolk is quite high, as the average median monthly rent is about $1531.

Health Indicators

Health-specific mortality, morbidity and natality are discussed elsewhere in this document. However, some overall trends are noted here.

Natality

Overall infant mortality declined from 85 to 72 deaths between 2007 and 2009 from a rate of 4.6 to 4.3 per 1,000 live births, a 6.5% drop. Neonatal deaths (infants <28 days old) increased marginally from 59 to 61, though the rate increased from 3.2 to 3.6 per 1,000 live births, or 12.5%. For post-neonatal deaths (infants 1 month to 1 year), the decline was from 26 to 11, or from a rate of 1.4 to 0.7, a precipitous 50.0% drop. Spontaneous fetal deaths (>20 weeks gestation), however, increased from 60 to 71, from a rate of 3.2 to 4.2, a 31.3% increase.

Mortality

From the most recently available data, there were 11,336 deaths in Suffolk County in 2011. The leading causes of death were heart disease (3,248 deaths; age-adjusted rate of 187 per 100,000), cancer (2,776 deaths; age-adjusted rate of 162 per 100,000), unintentional injuries (642 deaths, age-adjusted rate of 41 per 100,000), chronic lower respiratory diseases (585 deaths; age adjusted rate of 35 per 100,000), and stroke (435 deaths, age-adjusted rate of 25 per 100,000).

The age-adjusted total mortality rate for Suffolk County fell between 2007-2010—from 724.8 to 671.9 per 100,000, which is a 7.3% decline.

Morbidity

Preventing misuse of prescription opioid drugs—namely the use of prescription opioids in manners other than prescribed and the use of these medications without prescriptions—is a major public health concern for Suffolk County. A summary document of data resources and recommended guidelines was distributed to all prescribers in 2012. In Suffolk County, deaths involving opiates have risen by 30% in the period between 2007-2011. The incidence of one opiate in particular, oxycodone (which appears in 33% of opioid-related deaths), nearly doubled between 2007 and 2011.

Based on data from 2008-2010, it is estimated that 16.5% of all students (elementary, middle, and high school) are obese, where another 15.2% are overweight (but not obese). 29.1% of all elementary school students are either overweight or obese (15.2% are obese), while 35.5% of middle and high school students are either overweight or obese (18.4% are obese). Data from the New York State Expanded

Behavioral Risk Factor Surveillance System from 2008-2009 indicate that about 59.6% of Suffolk County adults are either overweight or obese, where 20.9% of adults are obese (these percentages are age-adjusted). For this reason, addressing obesity has been selected by the SCDHS in conjunction with the Nassau-Suffolk Hospital Council (NSHC) as one of its priority focus areas.

Another focus area selected by SCDHS and the NSHC is increasing access to chronic disease preventive care and management. Managing chronic disease is one of the most significant public health challenges moving forward, where an ever increasing number of individuals will develop one or more chronic conditions.

According to Centers for Medicare and Medicaid Services (CMS) administrative claims data from January 2007- December 2011 accessed from the Chronic Condition Warehouse (Table 1), the percentage of Medicare beneficiaries who are diagnosed with two or more chronic conditions in Suffolk County has increased slightly from 71.6% in 2007 to 72.2% in 2011.

Moreover, the per capita cost for treatment increases substantially for those with multiple chronic conditions, where such costs have also increased during the period between 2007 and 2011.

Listed in Table 2 are selected indicators related to chronic disease. Note that the information in Table 2 is from the most recent data available from the expanded Behavioral Risk Factor Surveillance System (2008-2009).

	2007				**2011**			
	Chronic Conditions				Chronic Conditions			
	0 to 1	2 to 3	4 to 5	6+	0 to 1	2 to 3	4 to 5	6+
Suffolk County Prevalence (%)	28.4	31.9	24.5	15.2	27.8	30.6	24.7	16.9
NYS Prevalence (%)	*29.7*	*31.5*	*23.8*	*15.0*	*30.0*	*30.0*	*23.4*	*16.6*
Suffolk County Per Capita Cost ($)	1,883.0	4,927.9	9,829.5	25,385.8	2,105.2	5,369.9	10,302.30	28,801.5
NYS Per Capita Cost ($)	*1,791.6*	*4,793.6*	*9,814.8*	*24,896.6*	*2,017.8*	*5,361.4*	*10,361.3*	*27,888.9*

Table 1. Prevalence of Multiple Chronic Conditions among Medicare Beneficiaries
Source: Chronic Condition Warehouse (CCW), CMS administrative claims data, January 2007- December 2011

	Suffolk County Percentage (Confidence Interval)	**New York State** Percentage (Confidence Interval)
Adults with physician diagnosed diabetes	9.0 (6.7-11.3)	9.0 (7.8-10.3)
Adults with high blood pressure	23.3 (19.4-27.2)	25.7 (23.8-27.5)
Adults with cholesterol checked in the last 5 years	82.1 (76.5-87.7)	77.3 (74.7-79.9)
Adults who smoke cigarettes	17.7 (12.7-22.7)	17.0 (15.3-18.8
Adults with current asthma	7.8 (4.7-10.9)	9.7 (8.2-11.2)
Adults who are obese (BMI 30 or higher)	20.9 (16.1-25.6)	23.1 (21.0-25.1)
Adults who did not participate in leisure time physical activity in last 30 days	78.8 (74.3-83.3)	76.3 (74.1-78.5)
Adults eating 5 or more fruits or vegetables per day	26.0 (20.8-31.2)	27.1 (24.9-29.2)
Adults (50-75 years) who received a colorectal cancer screening based on the most recent guidelines	64.0 (57.1-70.3)	66.3 (63.5-69.1)
Women (40+ years) with a mammography screening in past 2 years	80.5 (74.8-86.2)	79.7 (76.9-82.5)

Table 2. Comparing selected measures relevant to management of chronic disease in Suffolk County and New York State.
Source: 2008-2009 NYS Expanded Behavioral Risk Factor Surveillance System Data as of September 2013

B. HEALTH STATUS OF THE POPULATION

Family Health

Primary and Preventive Health Care

Primary and preventive care services have a substantial impact on the leading causes of death and disability in this country. Lack of appropriate primary care, including recommended screening and preventive services, increases poor health outcomes.[5]

According to the most recent Expanded Behavioral Risk Factor Surveillance System (BRFSS) 2013-2014, 92.3% of Suffolk County adults report having a regular health care provider and 87.3% have health care coverage. This is slightly better than New York State as a whole which reports 84.9% of adults with a regular health care provider and 83.3% with health care coverage. However, 18% of Suffolk County adults report 14 or more days of poor physical health in the past month, more than New York State as a whole with 12.1%.[6]

The following tables 3-5, summarize some important statistics, which compare the County of Suffolk to the rest of the State of New York. These causes of mortality are generally viewed as preventable through appropriate primary and preventive care.[7] Premature deaths are those that occur before a person reaches their calculated life expectancy, and are generally calculated as death due to disease before age 64-75 depending on the data source.

Table 3. 2007-2009 Age Adjusted Mortality Rate per 100,000

Cause Specific Mortality	Suffolk County	New York State
Colon & Rectal Cancer	16.8	15.7
Lung & Bronchus Cancer	46.5	42.8
Female Breast Cancer	22.5	21.7*
Cervical Cancer	1.9	2.3
Prostate Cancer	19.8	21.6

Source: NYSDOH. *Statistically significant difference

Table 4. 2008-2010 Cardiovascular Disease age Adjusted Mortality per 100,000

Cause specific mortality	Suffolk County	New York State
Cardiovascular age adjusted	247.5	250.9
Cardiovascular premature (ages 35-64)	80.8	102*
Diseases of the Heart age adjusted	203.2	207.6
Diseases of the Heart premature (35-64)	66.2	83.3 *
Stroke age adjusted	27.1	26.7
Stroke premature (35-64)	8.6	10.6 *

Source: NYSDOH. *Statistically significant difference

Table 5. 2008-2010 Crude Death Rates per 100,000

Cause specific mortality	Suffolk County	New York State
Adolescent (15-19) crude death rate	48.6	37.2*
Alcohol related motor vehicle injuries and deaths	51.7	36.2*

*Statistically significant difference
Source: http://www.health.ny.gov/statistics/leadingcauses/leadingcauses_death

The leading causes of preventable deaths in the US are smoking, hypertension and obesity.[8] An estimated 46% of deaths in New York State can be attributed to eight modifiable factors, for example: tobacco use, poor diet, lack of physical activity and alcohol use .[9] BRFSS Data on the percentage of Suffolk County adults reporting selected risk factors related to primary care and prevention in 2008-2009 are outlined in table 6.[4] Notably, preliminary reports from the BRFSS 2013 suggest smoking rates in Suffolk County have declined with 12.3% of adults reporting current smoking in 2013 down from 17.7% in 2008.[6] Additional information on risk factors is discussed elsewhere in this report.

Table 6. Percentage of Suffolk County Adults Reporting Selected Health Risks

	2008-2009 % (Confidence Interval)	Difference from 2007 (%)
No health insurance (all ages)	*7.4 (±3.2)*	*-2.2*
No health insurance (age 18-64)	*8.7 (±3.9)*	*-2.5*
Current smoking	*17.5 (±4.6)*	*-2.4*
Obesity	*21.3 (±4.5)*	*1.4*
Diabetes	*9.6 (±3.3)*	*4*
Binge drinking	*19.8 (±4.6)*	*.9*
Health status fair or poor	*11.9 (±2.8)*	*1.3*

Source: SMART BRFSS 2008-2009

Family Planning

Family Planning services improve maternal and child health in a number of ways:

- Reducing unplanned pregnancies,
- Delaying early pregnancies,
- Allowing women to space and time births during their reproductive life to optimize the health of both the mother and the infant,
- Allowing families to limit the number of children to a number which they can emotionally and financially support, and
- Providing a method of contraception that is personally acceptable and medically appropriate to each individual.

According to New York State Vital Statistic for 2011, there were 282,508 women of child bearing age in Suffolk County.[7] This reflects a decrease of 3.5% in this population since 2006.

In 2011, there were a total 19,545 pregnancies, 16,027 live births, 2,678 induced abortions, and 840 spontaneous deaths for all women in Suffolk County.[7] This represents a pregnancy rate of 69.2 (per 1,000 females) a significant decrease from the rate 85.9 and 76.0 per 1,000 in 2007 and 2010 respectively. The pregnancy rate for New York State in 2011 was 89.8 (per 1,000 females).

In 2011, there were 1,152 teenage pregnancies (ages 15-19) with 707 live births, 424 induced abortions, and 21 spontaneous deaths.[7] This represents a teenage pregnancy rate of 22.7[2] and is 4.4% of the total births in Suffolk County and a decrease in teen pregnancy rate from 30.3 per 1,000 in 2009. The teenage pregnancy rate for New York State during 2011 was 45.9. This indicates a significantly lower rate in Suffolk County when compared with all of New York State.

Table 7. Teenage Pregnancy in Suffolk County

	2011 Total in Suffolk County	2011 SC Dept. Health Centers	2012 SC Dept. Health Centers
Teen pregnancies	1167 (6% of total)	282 (8% of total)	209 (7% of total)
Teen births	715(4.5% of total)	155 (7.1% of total)	108(6% of total)

The total overall number of unintended births in Suffolk County during 2011 was 2,447 representing 21.6% of all live births. The total number of unintended births in all of New York State was 56,262 or 26.7% of all live births.[10]

Ethnic disparities continue to prevail: During 2011, the unintended pregnancy rate among Hispanic women was 30.5% and among Non-Hispanic Black women was 45.1%. The unintended pregnancy rate among White Non-Hispanic women was 15.2%.[10]

As of February 2012, adolescent pregnancies – Ages 15-17 years in Suffolk County were 4.5 times more likely amongst Black non-Hispanics than White non-Hispanics, and 5 times more likely among Hispanics than White non-Hispanics. The rate of adolescent pregnancies for Black non-Hispanics was 34.6%, for White non-Hispanics was 7.7% and Hispanics was 39.4%.[10]

In 2007, 72% of SCDHS Health Center Family Planning patients were of Hispanic Ethnicity. That percentage has increased to 81.3% in 2012.

In 2012, 93.7% of clients who received SCDHS Health Center Family Planning Services lived in high risk underserved zip codes. Fifty-seven percent of clients fell below the 100% federal poverty level, 41.4% fell between the 101%-250% federal poverty level and 1.6% fell above the 250% federal poverty level.[11]

Prenatal Care and Infant Mortality

Prenatal care is an essential component of community health. For some women, this is the first time since childhood immunizations that they are seeing a health care provider on a regular basis. Premature labor prevention, dental care, prenatal immunizations, nutrition, exercise, tobacco and substance abuse prevention/cessation, as well as interconception care can make a lifetime of difference for the mother, infant and the whole family.

Table 8. Pregnancy & Births in Suffolk County

	2011 Total in Suffolk County	2011 Suffolk County Dept. Health Centers	2012 Suffolk County Dept. Health Centers
Pregnancies (any age)	19,545	3,532	2,957
Live births	16,027	2,184	1,909
White	78%	9%	9%
African American	8.5%	11%	12%
Hispanic	31%	76%	75%
Other	13.3%	5%	5%

Note: County births do not add up to 100% because race and ethnic origin are not mutually exclusive (i.e. Hispanics can designate African American, white or other race). However, the Health Department's numbers capture only one race/ethnicity per person.

Table 9. Births in Suffolk County

	2011 Total in Suffolk County	2011 Suffolk County Dept. Health Centers	2012 Suffolk County Dept. Health Centers
Live births	16,027	2,184	1,909
Low birth weight	1,236 (7.7%)	115 (5.3%)	99 (5.2%)
Preterm birth (<37 wks. gestation)	1850 (11.5%)	166 (7.6%)	134 (7.0%)
Entry to care 1st trimester	71%	64%	67%

The county average for entry into care during the first trimester was 71% and the New York State (NYS) average was 70% in 2011. Healthy People 2020 goal is 77.9 %.

In 2011, women who were late to care (7-9 months) accounted for 514 or 3.2% of all births in the county. Only 80 women (0.5%) reported they had no prenatal care in Suffolk County in 2011. New York State average for late-to-care is 4.6% and reporting no care is 0.7%.[7]

Medicaid Prenatal Care Program

Per NYSDOH Vital Statistics, Suffolk County had 5,314 deliveries paid for via Medicaid health insurance (either as primary or secondary payer) in 2011. This represents 33% of the total deliveries in the county. 60% of the births were covered by private insurance; with 4.4% covered by "other insurance", and 2.4% were self-pay.[7]

Infant Mortality

In Suffolk County the 5 year average rate (2007-2011) for infant mortality was 4.2 per 1000 live births. In New York State the 5 year average rate for the same time period was 5.3 per 1000 live births.[12] The Healthy People 2020 objective is 6.0 per 1000 live births, so the county is well within that target.[13]

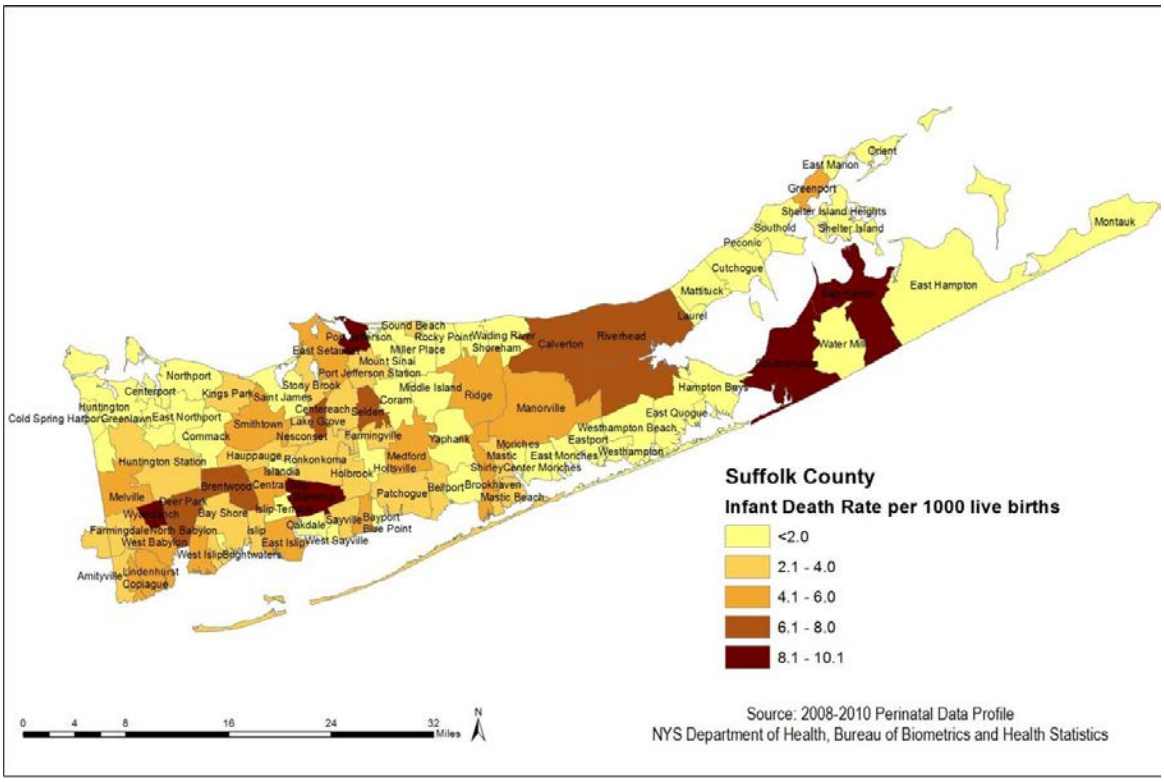


Figure 11. Infant Death Rate in Suffolk County by Zip Code

However, as also seen nationally, there is still a racial disparity between the African American (non-Hispanic) infant mortality rates and the white (non-Hispanic) rates in Suffolk County. [7, 14]

Table 10. Racial Disparities & Infant Mortality Rates

March of Dimes Peristats for Suffolk County shows the 3 year average (2006-2008) was: *African American: 9.6 per 1000 live births* *White: 4.1 per 1000 live births*
NYSDOH (bio-info@health.state.ny.us) provided 2007-2011 data: *African American: 10.06 per 1000 live births* *White: 3.42 per 1000 live births*

Preterm birth (birth before 37 weeks gestation) continues to be the primary reason infants die before their first birthday in Suffolk County.[14] Yearly, in Suffolk County there are approximately 60-70 infants who die before their first birthday due to the following (on average):

- 60% extreme prematurity
- 20% from congenital anomalies
- 9% from medical complications
- 11% from Sudden Unexplained Infant Death

Source: March of Dimes Peristats, 2009; SICD Resource Center 2013

These are available statistics on preterm births.[7]

- 2011 NYS: 10.7%
- 2011 Suffolk County: 11.7% (average of 2007-2010= 12.1%)
- 2012 SCDHS Patients: 7.0%
- 2020 Healthy People goal: 11.4%
- 2020 March of Dimes goal: 9.6%

Preterm births in New York State are highest among African American infants, with almost 16.4% of them born prematurely.[14]

Obesity in Pregnancy

In New York State in 2011, 18.9% of women ages 18-44 were obese.[14] The CDC Pregnancy Risk Assessment Monitoring System (PRAMS) shows that obesity before pregnancy in New York State has increased from 18% in year 2000 to 22% in 2008. [16]

Perinatal Mood Disorders

This issue can affect women during their pregnancy, as well as in the post-partum period, up to a year after the birth of their child. Nationally, research has shown that 10% or more of pregnant women may experience depressive symptoms. Post-partum depression may affect 10-20% or more of new mothers. Many of the women enrolled in the Suffolk County Department of Health Services (SCDHS) Prenatal Program have numerous stressors—economic, social, partner/family issues. These can add to the possibility of depression at this time in their lives.

Child Health

Twenty-four percent of the populations in Suffolk County are under the age of 18 years old; which is 357,670 children under the age of 18 years old. In 2012, there were approximately 112,445 children under six years of age in Suffolk County with an estimated 32,702 between one and two years old. This is in comparison to 370,629 children in year 2006. These children are from different ethnic groups as shown below in the pie graph.[1]

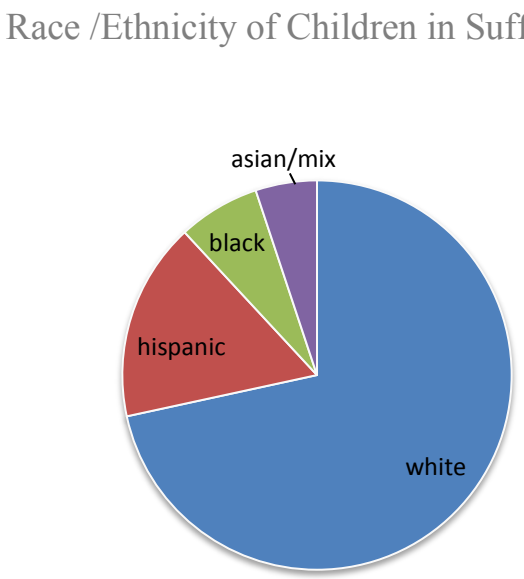


Figure 12a. Race /Ethnicity of Children in Suffolk County. Source: U.S. Census 2010

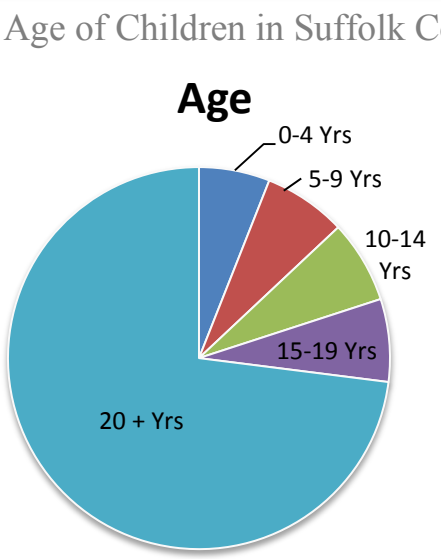


Figure 12b. Breakdown of the population according to age. Source: U.S. Census Bureau 2010

There were a reported 6.4% of uninsured children under the age of 19 according to the 2008 Census Bureau 'Estimates of Uninsured'; this is lower than the overall state value of 7.4%. The following are some facts from the Children's Defense Fund, an organization who is affiliated with the US Bureau of the Census[17].

- Uninsured children are 10 times more likely than insured children to have unmet medical needs, for example asthma, diabetes or obesity going untreated; and are 5 times as likely as insured children to go more than 2 years without seeing a doctor.
- Two-thirds of children with mental health needs do not get proper care.
- Uninsured children are more than 4 times as likely to have unmet dental health needs as insured children.
- Uninsured children are more likely to perform poorly in school, but when they do obtain insurance their school performance increases.

Additional outreach is also needed for the adolescent population. According to the 2011 NYSDOH Office of Quality and Patient Safety Data as of November 2012, 67% of persons 12-21 years old had the recommended number of well child visits in government sponsored insurance programs, this is in comparison to 91.3% ages 0-6 years old.[18] A challenge in reaching such groups is noncompliance, lack of education on the importance of annual physical exams and/or vaccine updates and sports physicals performed in the schools.

Childhood Asthma

Asthma is the most common chronic lung disease of childhood and causes significant morbidity and missed school days. In 2010 315,000 children in New York State had current asthma (asthma diagnosed by a health professional and still present at time of survey).[19] The following tables summarize some important statistics about asthma, and compare the County of Suffolk to the rest of the State of New York.

Table 11.Childhood Asthma Hospital Discharge Rates

Asthma (Age 0-4 Y) Discharge Rate per 10,000 Population 0-4 Years

Year	Suffolk County Single Year	Suffolk County 3 Year Average	Upstate NY
2007	41.3	41.1	32.8
2008	42.4	42.7	35.0
2009	44.5	43.2	39.0

Asthma (Age 5-14) Discharge Rate per 10,000 Population 5-14 Years

Year	Suffolk County Single Year	Suffolk County 3 Year Average	Upstate NY
2007	11.4	11.3	10.0
2008	10.6	12.8	9.8
2009	16.4	13.3	13.5

Asthma (Age 0-17 Y) Discharge Rate per 10,000 Population 0-17 Years

Year	Suffolk County Single Year	Suffolk County 3 Year Average	Upstate NY
2007	18.0	17.8	14.7
2008	17.6	19	15.1
2009	21.5	19.1	18.3

Source: 2008 – 2010 vital Statistics reported on the NYSDOH website.

Lead Poisoning

Childhood lead poisoning is a serious health problem that can have a devastating effect on a child, and has serious repercussions for society as a whole. Human interaction with lead in the environment is most dangerous for children under age six. It is a silent disease. Exposure to even small amounts of lead can contribute to behavior problems, learning disabilities, and lowered intelligence. These devastating problems can go undiagnosed and untreated until the child enters school. Screening and prompt and effective intervention have been shown to prevent some of the

more advanced effects of lead poisoning, such as seizures, severe kidney and nervous system damage. According to statements by the Centers for Disease Control and Prevention (CDC), no "safe" threshold for blood lead levels in children has been identified, some data indicate adverse effects of lead exposure in children at blood lead levels (BLL) less than 10/ug/dl of whole blood and serious adverse effects can occur at levels greater than 10 /ug/dl.[20] The CDC strongly recommends primary prevention and universal screening of all children up to six years of age. It also recommends the use of a multi-disciplinary approach to prevention, involving professionals from the communities of health, social services, housing, education, and other civic-minded groups. New York State legislation requires that all primary providers who care for children perform a risk assessment and offer anticipatory guidance at each well child visit, or at least annually, to perform a blood lead screening at about twelve months and two years of age, regardless of risk factors, and to perform lead screening at any subsequent year if risk factors are present.

New York State requires all pediatric providers to: 1. assess each child who is between the ages of six months and six years for lead exposure at each routine well-child visit, or at least annually; 2. test or refer for lead testing, any child who is at risk; 3. screen and test all children at their one and two-year-old physical exams regardless of risk and provide nutritional counseling, education and guidance on lead poisoning prevention to the parent or guardian of each child under the age of six as part of routine care. Since this law was enacted, private sector screenings have increased.

During 2012, there were 32,499 lead screening tests done County-wide. This represents a 28.90% of the total number of children under the age of six screened in Suffolk County. Unfortunately, many private providers do not see lead screening as a priority.

Medicaid mandates that lead screening be done at the age of 1 and 2 years' complete physical exam. The percentage of Long Island two-year olds in Medicaid managed care plans that had their blood tested for lead poisoning at least once by their second birthday ranges from 84%-96%. Notably Neighborhood Health Plan which was utilized by the Suffolk County Department of Health- Health Centers was far above the state average (89%) with a lead screening rate of 96%.[21] In 2012, Suffolk County DHS Health Centers offered 2,051 lead tests to children 0 to 19 years of age. 1,892 were Medicaid/CHP recipients and 159 on a sliding scale fee (ability of the patient to pay).

According to the "NYS Reducing Lead Exposure in Children Lead Testing and Lead Poisoning Among New York State Children 2009 Report", the incidence of childhood lead poisoning varies across the state. For the three-year period from 2007 through 2009, 90 percent of children under age six years newly identified with BLLs > 10 mcg/dL resided in twenty-five counties. Suffolk County Ranks 14th in the top 25 counties in New York State that account for 90% of lead cases.[22]

Children with Special Needs

The Division of Services for Children with Special Needs, Early Intervention Program ensures families and children receive appropriate services and/or referrals. Early Intervention Services were provided to approximately 6,000 infants and toddlers in 2012. Approximately 93% of these children received services at home, with speech and language the most common service authorized. The State and the County share costs of the program.

Suffolk County's 71 school districts' Committees on Preschool Special Education determine eligibility and services for children aged 3-5 years. County representatives ensure appropriate placement of preschool children with disabilities in the least restrictive environment. The Preschool Program evaluated 4,328 children during the 2012 calendar year. Of those evaluated, approximately 80% were eligible to receive services.

Dental Health

Dental caries are the most common chronic disease of childhood and can impact systemic health. Although most dental carries are preventable, almost 80% of children in the United States experience tooth decay by the time they finish high school. In the United States, children are estimated to lose over 52 million school hours annually because of dental problems and dental visits. Baby bottle caries is 100% preventable, but is a frequently occurring problem. The problem is magnified by the severely limited availability of pedodontists to treat uninsured Suffolk County children with this condition.

Dental decay is still one of the most chronic infectious diseases among U.S. children. According to the National Institute for Health, this preventable health problem declined from the early 1970's until the mid-1990's, but this trend has reversed. According to the CDC, 28% of children ages 2-5 have already had decay in their primary (baby) teeth.[23] 50% of children have experienced tooth decay by age 11, and 68% of 19 year olds have experienced tooth decay in their permanent teeth. Low income children are twice more likely to experience decay than children of higher income families. Among low-income children, almost 50% of tooth decay remains untreated, and may result in pain, infection, as well as self-esteem issues that can reduce a child's capacity to succeed in the educational environment. Tooth decay and infection has led to millions of lost school hours for American children.

In 2003 a study of third grade children living in Suffolk County was conducted by NYSDOH. The study elucidated many differences in dental health based on socioeconomic status. For example, 67% of children who qualified for the free lunch program were found to have caries in the past as opposed to 39% of children who did not qualify for free lunch. Thirty-five percent of children receiving free lunch had untreated caries, while 24% of children who did not qualify for free lunch had caries. Only 17% of children in the free lunch program had sealants applied to their teeth and

only 44% of children who did not qualify for free lunch had the sealants. 48% of children qualifying for free lunch had dental visits within the last 12 months while 80% of all other children were seen. Only 18% of the school lunch children were known to take oral fluoride supplements. Just as disturbing, of all other children only 32% were taking oral fluoride.

Injury Prevention

Intentional and unintentional injuries result in loss of life, loss of independence and are a drain on state and county resources. Intentional injuries are generally those from suicide or homicide where there is an "intent" to cause harm, while unintentional injuries are unplanned such as from falls, and motor vehicle collisions, fires and drowning. According to the NYSDOH website, injuries are the leading cause of death for New Yorkers 1- 44 years of age and among the top causes of death for all other age groups.[24]

Death rates from unintentional injuries in Suffolk County are 37.2% higher than the Statewide rate (Table 12), where the rates have remained relatively stable over the past ten years. Between 2008 and 2010, unintentional injuries in Suffolk accounted for 1,483 deaths. These deaths accounted for about 10.6% of all statewide injury-related deaths during the time period (Table 12). Additionally, there is a disproportionately higher rate of unintentional injury hospital discharges for Suffolk residents (78.7 per 10,000) as compared to New York State as a whole (69.2 per 10,000) (Table 13). This disparity holds true across most age groups (Table 13) as well as across most injury etiologies (Table 3).

Table 12. Unintentional Injury Deaths and Death Rates, 2008-2010

Area	2008 Deaths	2009 Deaths	2010 Deaths	Total Deaths	Population 2005	Crude Rate	Adj. Rate
Suffolk	517	441	525	1,483	1,508,016	32.8	32.1
New York State (NYS) Total	4,988	4,268	4,720	13,976	19,469,951	23.9	22.4

Source: New York State Department of Health Vital Statistics Data as of February, 2012

Table 13. Unintentional Injury – Discharge Rate per 10,000 Population

Area/Age Range	2008 Discharges	2009 Discharges	2010 Discharges	Total Discharges	Crude Rate	Adj. Rate
Suffolk Age < 10	459	454	450	1,363	24.0	N/A
NYS Age <10	6,260	6,229	6,198	18,687	26.2	N/A
Suffolk Age 10-14	261	245	233	739	23.1	N/A
NYS Age 10-14	2,753	2,518	2,416	7,687	21.1	N/A
Suffolk Age 15-24	931	928	946	2,805	46.0	N/A
NYS Age 15-24	9,154	8,758	8,550	26,462	31.9	N/A
Suffolk Age 25-64	4,198	4,559	4,539	13,296	54.9	N/A
NYS Age 25-64	48,359	49,409	48,836	146,604	46.5	N/A
Suffolk Age 65+	5,606	5,870	5,938	17,414	288.6	N/A
NYS Age 65+	68,098	69,055	67,519	204,672	260.9	N/A
Suffolk Total	11,455	12,056	12,106	35,617	78.7	75.5
New York State Total	134,624	135,969	133,519	404,112	69.2	64.5

Source: New York State 2008-2010 SPARCS Data as of May, 2011

Death rates for Suffolk residents due to motor vehicle crashes have improved since 2007 (12.2 per 100,000) to 2010 (9.7 per 100,000) but are disproportionately higher than New York State's rates (6.0 per 100,000) (Table 14).[2] Several factors place the population at increased risk of these unintentional injuries. The county, with its large geographic size and many miles of roads, has a heavier traffic load than most other counties in New York State, and this is one of the contributing factors to the high rate.

Table 14. Motor Vehicle Mortality Rates

Indicator	Suffolk Rate	NYS Rate	NYS Rate Excluding NYC
Motor Vehicle Mortality Rate per 100,000	9.9	6.0	8.0
Alcohol related MVI & Deaths per 100,000	51.7	36.2	50

Source: New York State DOH Vital Stats, 2008-2010 Age Adjusted Rate

Motor vehicle crashes are the leading cause of death for teens in NYS and result in $30 million per year for hospital costs. Teen drivers are inexperienced, are more likely to take risks when driving, including behaviors such as drinking, using drugs when driving, and reckless driving, and are more likely to be distracted by passengers and cell phones. Teen drivers are more likely to underestimate dangerous situations. In addition, they are more likely to drive when drowsy, which can be as dangerous as driving when drunk.

According to the Youth Risk Behavior Surveillance System (YRBSS), 83.6% of students who had ridden a bike in the past year reported they did not wear a helmet.[26] Traumatic Brain Injury (TBI) is an injury to the brain or skull caused by an external force. TBI's are often permanent and disabling. Children ages 0 to 4 years, older adolescents aged 15 to 19 years, and adults aged 65 years and older are most likely to sustain a TBI and require hospitalization as a result of a TBI.[27] Each year, 4000 NYS children 19 and under are treated at hospitals for sports-related TBI's, most often from engaging in contact sports.

Poisoning can range from accidental medication over doses to hazardous chemical exposure. In Suffolk County the age adjusted rate of hospitalizations due to poising has steadily risen from 6.7 per 10,000 in 2002 to 11.2 per 10,000 in 2011. This follows a similar trend in New York State with an age adjusted poisoning hospitalization rate of 7.8 per 10,000 in 2002 to 10.7 per 10,000 in 2011.[2] From 2006-2008 poisoning was the second (after suicide) leading cause of injury related death for 25-64 year olds in New York State.[24]

Table 15. Discharge Rate per 10,000 for Selected Injury Etiologies

Area/Age Range	2008 Discharges	2009 Discharges	2010 Discharges	Total Discharges	Crude Rate	Adj. Rate
Traumatic Brain Injury						
Suffolk Total	1,522	1,686	1,666	4,874	10.8	10.6
NYS Total	18,712	19,471	19,397	57,580	9.9	9.4
Poisonings						
Suffolk Total	1,464	1,558	1,662	4,684	10.4	10.4
NYS Total	20,235	20,110	21,051	61,396	10.5	10.2

Source: New York State Department of Health Vital Statistics Data as of May, 2011

Falls are a leading cause of injury deaths, hospitalizations and ED visits in adults 65 years of age and older. They can result in lasting serious consequences which affect mobility, independence, and mental health. Each day in NYS, two individuals 65 or over die, 140 are hospitalized and 227 are seen in ED's as a result of a fall. The cost to the state is $1.76 billion in hospitalizations and $145.3 million in out-patient treatment per year.[24] Suffolk County has one of the fastest growing senior citizen population rates in New York State. In 2010 the population of persons greater than 65 in Suffolk County was calculated at 201,793 accounting for 13.5% of the total population. In 2000 this population totaled 167,558 accounting for 11.8% of the total population at that time. During this 10 year period, the senior citizen population in Suffolk County increased 20.5% faster than any other age demographic in the County. This population continued to grow in 2012 to 216,841 with an increase of 15,048 individuals over the age of 65 representing a 7.5% increase in two years and a 28% increase since 2000.

Table 16. Hospitalizations Due to Falls

Fall Hospitalization Rate per 10,000	Suffolk Rate	NYS Rate	NYS Rate Excluding NYC
Age Adjusted	42	36.2	36.8
<10 yrs.	10.2	10	8.5
25-64yrs	21.3	18.7	18.7
65-74yrs	83.5	77.5	78.5
75-84 yrs.	271.3	230.8	242.4
>85 yrs.	710.3	567.7	617.0

Source: New York State Department of Health Vital Statistics Data as of May, 2011

According to the 2006-2008 Vital Statistics Data, at least 36,000 Americans die by suicide each year.[7] The suicide rate for Americans age 45-64 has increased by 30% in the past 10 years. Suicide

is the third leading cause of death among 15-24 year olds. It is estimated that for every death by suicide, there are 7 additional individuals that are immediately and intimately affected. Self-inflicted injury in Suffolk County is slightly on the rise, with the rate of hospitalizations increasing from 4.4 per 10,000 in 2007 to 5.0 per 10,000 in 2010. This trend is especially pronounced in the 15-19 age range, where rates between 2007 and 2009 increased from 6.8 to 10.7 per 10,000 (a 57.4% increase). Suicide mortality increased between 2007- 2010, where the rate was 7.0 and 8.8 per 100,000 persons respectively. This is a 25.7% rate increase, and the number of suicides increased from 102 in 2007 to 132 in 2010.[7]

Intentional injuries may be the result of mental health issues; 24.9% of students reported they felt sad or hopeless almost every day for two or more weeks in the previous year, 12.9% had seriously considered suicide and 7.1% had attempted suicide. More than 17% of students reported being bullied on school grounds in the previous 12 months and 16.2% said they were bullied electronically.[26] Current data shows that the overall suicide rate (number per 100K) in Suffolk County is similar to the state average. New York State has fortunately seen a recent reduction in the total number of suicides. This reduction may be attributable to the coordinated effort of the public and private sectors to educate and raise awareness regarding this dangerous trend.

Table 17. Intentional Injury

Indicator	Suffolk Rate	NYS Rate	NYS Rate Excluding NYC
Suicide Mortality rate per 100,000 Age Adjusted	6.9	6.8	8.1
Suicide Mortality rate per 100,000 Ages 15-19 yrs.	4.3	4.0	4.9
Self-inflicted injury hospitalization rate per 10,000 age adjusted	4.9	5.1	6.2
Self-inflicted injury hospitalization rate per 10,000 ages 15-19yrs	8.9	9.7	11
Homicide Mortality per 100,000 age adjusted	3.1	4.4	3.1
Assault Hospitalizations rate per 10,000 age adjusted	2.9	4.7	2.8

Source: New York State Department of Health Vital Statistics Data as of May, 2011

Mental Health

Almost 14% of Suffolk County Adults report 14 or more days of poor mental health in the previous month.[6] Historically, the bulk of publically-funded mental health services have provided care for adults with serious mental illness (SMI) and children with serious emotional disturbance (SED). The most recent Patient Characteristic Survey (PCS) revealed that 97% of individuals enrolled in the Suffolk County's public mental health system were identified as having serious mental illness or serious emotional disturbance – a marked increase from 82% identified in the preceding PCS. During the 2011 survey period there were 9,469 individuals receiving psychiatric services in publically-funded programs, representing 638 individuals per 100K population. This is approximately two-thirds of the statewide average of 872 individuals per 100K population.[28] As PCS only captures those individuals receiving treatment, the difference may reflect limited service capacity rather than lesser need.

Chemical Dependency

The abuse of opioid medication has dramatically increased and is considered the fastest growing drug problem in the US. From 2007-2010 opioid pain reliever abuse rose 87% in New York, most notably in Suffolk County and Staten Island. According to the Suffolk County medical examiner, deaths due in part to non –heroin opioid use rose by 70% between 2004 and 2011. In Suffolk County, there were 214 opioid-related deaths in 2012, and 110 deaths so far in 2013. Furthermore, toxicology reports in Suffolk County demonstrate a rise in the use of oxycodone and oxymorphone.

Substance abuse services are licensed by New York State's Office of Alcoholism and Substance Abuse Services (OASAS) whose mission is "To improve the lives of New Yorkers by leading a premier system of addiction services through prevention, treatment, recovery". According to OASAS, 18,724 unique individuals were served by chemical dependency treatment programs in Suffolk County in 2012. The majority of those served were male (70.5%) and white (76.6%), 7.0% were 18 years of age or younger; 28% were 19-25 years old; 43.4% were 26-45 years old; and 22.6% were 45 or older, the most common, self-reported primary drug of abuse was alcohol (40.5%), followed by opioids (heroin (18%); other opiate/synthetic (9.2%), Oxycontin (3.7%), buprenorphine (0.1%), non-Rx Methadone (0.1%)), marijuana/hashish (14.7%), crack/cocaine (5.1 and 4.7% respectively) and 3.9% other/unknown. The primary payment sources for treatment were Medicaid (24.8%), Medicaid Managed Care (11.1%), self-pay (13.9%), private insurance (9.3%), private insurance managed care (19.8%) and other/none (21.1%).[29]

During the 2010-2011 school year OASAS administered the Youth Development Survey (YDS) in Suffolk County Schools. The YDS is a student perception survey which assesses specific risk and

protective factors that predict substance use and other problem behaviors. The total number of students surveyed in Suffolk was 16,119; (7,470 female; 8,162 male) the data are organized over 4 domains and three grade level clusters. Table 18 shows the primary risk and protective factors identified in each domain sorted by grade level.[30]

Table 18: Risk and Protective Factors Identified in the Youth Development Survey

SETTING →		COMMUNITY	FAMILY	SCHOOL	INDIVIDUAL or/PEER
HIGHEST REPORTED RISK FACTORS For each grade level *GOAL: To REDUCE these risks	7th & 8th Grade	Low Neighborhood Attachment	Family Conflict	Low Commitment to School	Rebelliousness
	9th & 10th Grade	High Community Disorganization	Parental Attitudes Favorable to ASB	Low Commitment to School	Peer Rewards for ASB
	11th & 12th Grade	High Community Disorganization	Parental Attitudes Favorable to ASB	Low Commitment to School	Peer Rewards for ASB
LOWEST REPORTED PROTECTIVE FACTORS For each grade level *GOAL: To INCREASE these factors	7th & 8th Grade	Rewards for PSI	Family Attachment	School Rewards for PSI	Peer Rewards for PSI
	9th &10th Grade	Rewards for PSI	Family Attachment	School Rewards for PSI	Religiosity
	11th & 12th grade	Rewards for PSI	Family Attachment	School Rewards for PSI	Religiosity

Source: NYS Office of Alcoholism and Substance Abuse Service, Youth Development Survey
ASB = Antisocial Behavior (Alcohol, Tobacco, Other Drug Use; fighting; stealing; vandalism)
PSI = Prosocial Involvement (positive activities)

Information regarding alcohol, tobacco and other drug use was also collected in the survey. The YDS found that 30 day prevalence of self-reported alcohol use in 12th graders in Suffolk County (56.7%) is considerably higher than the average national prevalence (41.2%) for this grade level reported in the annual "Monitoring the Future" survey (University of Michigan) for that same year. Table 19 provides additional information obtained from the YDS related to age of first use, location of use, and binge drinking (binge drinking is defined as 5 or more drinks on an occasion for males and 4 or more drinks on an occasion for females):

Table 19 – Measures of Tobacco, Alcohol and Marijuana Use for Grades 7-12 in Suffolk County schools 2011-2012

GRADE	AGE OF FIRST USE REPORTED	Where did you drink alcohol in the past year?	BINGE DRINKING
7th & 8th Grade	Marijuana – 12.2 Cigarettes – 11.5 Alcohol – 11.5	My Home – 5.2% Someone Else's Home – 3.7% Open area (Park) – 1.2%	3.7% Suffolk County
9th &10th Grade	Marijuana – 13.7 Cigarettes – 13.3 Alcohol – 13.3	My Home – 9.0% Someone Else's Home – 24.9% Open area (Park) – 5.7%	17.9% Suffolk County
11th & 12th grade	Marijuana – 14.7 Cigarettes – 14.3 Alcohol – 14.3	My Home – 10.3% Someone Else's Home – 50.0% Open area (Park) – 4.5%	34.0% Suffolk County

Source: NYS Office of Alcoholism and Substance Abuse Service, Youth Development Survey

Comparison of the age of first use across the 3 grade levels suggests the 7th and 8th graders surveyed may have initiated alcohol and other drug use at an earlier age than students at higher grade levels. Survey results also indicate that 9th-12th graders believe their parents have more favorable attitudes toward alcohol, tobacco and other drug use. This perception may help explain the relatively high rates of drinking at home and binge drinking seen at these grade levels.

People with Intellectual and Developmental Disabilities

Services for individuals with developmental disabilities, including intellectual disabilities, cerebral palsy, Down's syndrome, autism spectrum disorders, and other disabilities are coordinated and overseen by the New York State Office for People With Developmental Disabilities (OPWDD) whose vision is that "People with developmental disabilities enjoy meaningful relationships with friends, family, and others in their lives; experience personal health and growth; and live in the home of their choice and fully participate in their communities".

According to United States Census data persons with disabilities (all types) constitute about 9 percent of the total population of Suffolk County. Within the population of children, birth to 17 years, approximately 3 percent are classified as disabled.[1]

Nutrition

Food insecurity and hunger continues to be a problem for many Suffolk County financially challenged residents. Long Island Cares, the regional Long Island food bank has seen a substantial increase in Suffolk County residents going to food pantries and soup kitchens recently. Hopefully, as the economy continues to improve, fewer Suffolk County residents will have reduced need for Supplemental Nutrition Assistance Program (SNAP), soup kitchens and food pantries

To help alleviate hunger, as well as improve nutrition status in Suffolk County the Department of Health Services (SCDHS) has sponsored the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) since 1975. Low income (defined as 185% or less federal poverty) pregnant women, breastfeeding mothers, infants and children up to 5 years of age who are at nutritional risk can receive monthly WIC benefits including nutrition education, referrals to health and human services and food checks to purchase nutritious supplemental foods. In 2012, 17,508 low income (185% of federal poverty level) eligible clients with monthly WIC benefits: 1,701 pregnant women, 1,747 partially breastfeeding mothers, 216 exclusive breastfeeding mothers, 1,021 postpartum mothers, 4,692 infants, and 8,131 children (1 to 5 years) received monthly WIC benefits. Overall in 2012, 34% women, 27% infants and 46% children received WIC Program benefits. During the 2012 summer months 8,180 WIC families also participate in the Farmer Market Nutrition Program where they received an additional $24 food checks to purchase only locally grown Long Island fruits and vegetables. In 2012, over $15 million WIC food and formula checks were redeemed by SCDHS WIC participants in Suffolk County at over 100 WIC contracted stores. Each month over $1.2 million WIC food checks are cashed in Suffolk.

Suffolk County has a predominantly Hispanic WIC population compared to the entire State. The latest WIC SIS Ethnicity and Race report for October 2012 to March 2013 indicated that 67% of the WIC participants served were Hispanic and 37% were non-Hispanic. Overall, in NYS, only 37% of WIC participants were Hispanic. Overall, 55% are white, 20% American Indian (includes individuals originally from Central and South America), 14% African American, 7% Pacific Islander, 2% Asian, and 2% Mixed race.

The health benefits of breastfeeding have been well documented, including healthier and leaner babies, and reducing healthcare costs. Although initial breastfeeding rates have increased in the past decade for NYS according to CDC very few mothers continue to breastfeed at 6 months and

still fewer breastfeed for one year. The State has reported in 2011 that 80% of Suffolk County WIC mothers ever breastfed their babies. At 6 months only 31% of mothers were partially breastfeeding, and this decreased to 15% at 12 months. For WIC mothers who exclusively breastfed in 2011, 5.2% breastfed for 3 months, and exclusive breastfeeding decreased to 2.7% at 6 months. In 2012, 59% of all postpartum mothers receiving SCDHS WIC benefits partially breastfed their babies, and only 7% exclusively breastfed their babies.

Jail Medicine

Within the incarcerated population some of the greatest health problems affect incarcerated juveniles (age 16 – 19) who become in need of health care during their incarceration. Incarcerated juveniles represent 10% of the overall population. This population has its own unique set of problems; including growth and development issues and the need for not only basic general education, but an abundance of support regarding access to medical care within the correctional environment. The Jail Medical Unit (JMU) recognizes that for many of these young men and women this is not only their first incarceration but also their first introduction to responsible health care. As such, this particular segment of the inmate/patient population is treated as a priority and given immediate opportunities to address any health-related needs they may have and to ask any questions any aspect of their health care.

According to the Justice Policy Institute, "Substance Abuse Treatment and Public Safety," approximately 25% of incarcerated individuals have been convicted of a drug offense. Many of these individuals are dually diagnosed with both a substance abuse and mental health problems that, unless managed and/or treated will continue to exacerbate their legal/criminal issues.[31]

The profile of the JMU population is consistent with national averages, and includes a substance abuse prevalence estimated to be between 70 and 85%. Alcohol and substance abuse treatment services are provided at the Jail Medical Unit through the Suffolk County Division of Community Mental Hygiene. Individualized treatment services and discharge planning are managed through substance abuse counseling staff with more extensive clinical services such as adjunctive therapies, managed through psychiatric and psychological treatment staff.

Table 20. JAIL MEDICAL PROGRAM DATA SUMMARY

	2012
Annual Daily Census	1,686
New Admission Screenings	12,143
Clinic visits	15,758
Dental visits	2333
Hospital Admissions	160
Patients days in the hospital	2029
Emergency room visits	637

Over the past years there has been an increase in the need and demand for physical therapy services ordered by orthopedic surgeons and/or specialists. On average there are between 3 and 5 requests for 2 to 3 inmate/patient physical therapy visits per week relating to injuries of the hand, shoulder, knee and back. As a result, efforts will continue to be made to bring physical therapy services to the jail as there are few local resources that the inmate population can take advantage of.

DISEASE CONTROL

Chronic Diseases

The World Health Organization (WHO) defines chronic diseases as diseases of long duration and generally slow progression. Chronic diseases, including heart disease, stroke, and diabetes, are by far the leading cause of mortality in the world, representing 63% of all deaths.[32]

Chronic diseases, especially heart disease and stroke, are leading causes of death in New York State. According to New York State Department of Health Vital Statistics Data, Heart Disease has been the number one cause of death in NYS for at least the past 10 years; Stroke has been identified as the number four cause of death for the past 4 years, and was the third leading cause of death for 5 of the past 10 years.[7] Major risk factors for heart disease include hypertension, high cholesterol, physical inactivity and poor nutrition. Overweight and obesity are risk factors for cardiovascular disease, type 2 diabetes, certain cancers, and osteoarthritis. Arthritis is the most common cause of disability among U.S. adults.

Cardiovascular Disease

Heart disease and stroke, the most common cardiovascular diseases, have been among the top four leading causes of death in New York State Suffolk County

The tables below, extracted from the, reflect the impact of cardiovascular, cerebrovascular, heart disease and stroke, statewide and on Long Island.

Table 21.Adjusted Rates Are Age Adjusted to the 2000 United States Population

Cardiovascular Disease Mortality Rate per 100,000

	Deaths				**Average population**	**Crude**	**Adjusted**
Region/County	**2008**	**2009**	**2010**	**Total**	**2008-2010**	**Rate**	**Rate**
Suffolk	4,249	4,007	4,006	12,262	1,508,016	271.0	247.5
Nassau	5,028	4,582	4,795	14,405	1,349,529	355.8	261.7
Region Total	9,277	8,589	8,801	26,667	2,857,545	311.1	255.2
New York State Total	58,624	55,796	54,525	168,945	19,469,951	289.2	250.9

Cardiovascular Disease Premature Death (ages 35-64 years) per 100,000

	Deaths				**Average population**	**Crude**
Region/County	**2008**	**2009**	**2010**	**Total**	**2008-2010**	**Rate**
Suffolk	571	462	527	1,560	643,923	80.8
Nassau	511	376	501	1,388	577,827	80.1
Region Total	1,082	838	1,028	2,948	1,221,749	80.4
New York State Total	8,315	7,805	7,989	24,109	7,877,398	102.0

Source: NYS DOH 2008-2010 Vital Statistics Data (February, 2012)

Table 22. Cerebrovascular Disease (Stroke) Mortality Rate per 100,000

	Deaths				Average population	Crude	Adjusted
Region/County	**2008**	**2009**	**2010**	**Total**	**2008-2010**	**Rate**	**Rate**
Suffolk	449	435	446	1,330	1,508,016	29.4	27.1
Nassau	418	400	398	1,216	1,349,529	30.0	22.5
Region Total	867	835	844	2,546	2,857,545	29.7	24.7
New York State Total	5,882	5,823	6,120	17,825	19,469,951	30.5	26.7

Source: NYS DOH 2008-2010 Vital Statistics Data (February, 2012)

Hypertension

Hypertension is among the leading controllable risk factors for heart disease and stroke. One in three US adults have High blood pressure and more than 50% of this population does not have their blood pressure under control.[13] Hypertension is also a leading cause of end stage renal disease, accounting for 25% of ESRD cases in New York State.[33] According to *Million* Hearts, a national initiative launched by the Department of Health and Human Resources (HHS) in 2011, African American adults of both genders are more likely to have high blood pressure and 10% less likely than white adults to have their blood pressure under control.[33] Healthy people 2020 goals aim to reduce the proportion of adults in the population with hypertension from 30% to 27%.[13] The percent of Suffolk County Adults that have ever been told they have hypertension has risen from 23.3% in 2008 to 29.4% in 2013. This percentage is similar to New York State as a whole with 28.4% of adults having hypertension.[4, 6] The rate of hospitalization for hypertension in Suffolk County is also rising as illustrated in figure 13, suggesting that uncontrolled hypertension is also an area of continued concern.

Suffolk County Hypertension hospitalization rate per 10,000 – Ages 18 years and older

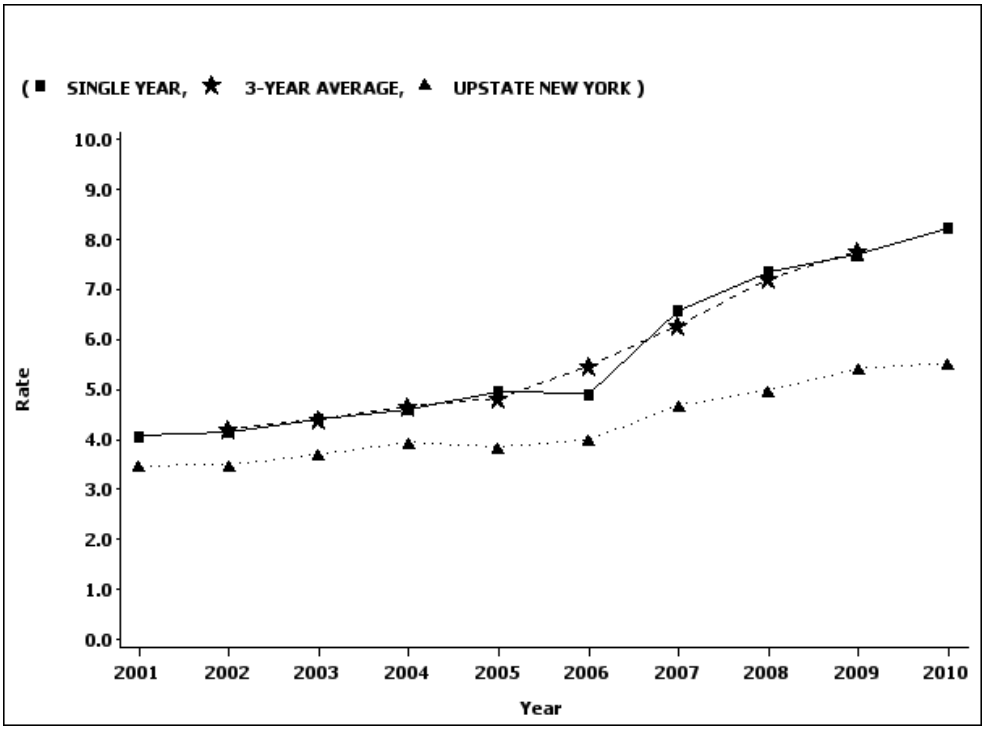


Figure 13. Source: NYSDOH, Single Year- Suffolk County, 3-Year Average - Suffolk County

High Cholesterol

High Cholesterol is another significant risk factor for Cardiovascular Disease and stroke. The following table reflects current age-adjusted statistics relating to cholesterol testing among adults living in Suffolk County, compared to Nassau County and the NYS total.[4]

Table 23. Age-Adjusted Percentage of Adults with Cholesterol Checked in the Last 5 Years

	Percentage
Region/County	**(CI)**
Suffolk	82.1 (76.5-87.7)
Nassau	83.2 (78.2-88.1)
New York State Total	77.3 (74.7-79.9)

Source: 2008-2009 NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)

Diabetes

Diabetes is a major cause of heart attack and stroke, and is the leading cause of kidney failure, non-traumatic lower limb amputations, and new cases of blindness among adults in the U.S. Though, diabetes is underreported as a cause of death. Diabetes was the seventh leading cause of death based on U.S. death certificates in 2007.[35]

According to the National Diabetes Fact Sheet, 2011, diabetes affects 25.8 million people, 8.3% of the U.S. population. Of those affected, 18.8 million people have been diagnosed with diabetes, and 7.0 million people are undiagnosed.[35]

Table 24. Age-Adjusted Percentage of Adults with Physician Diagnosed Diabetes

Region/County	Percentage (CI)
Suffolk	**9.0 (6.7-11.3)**
Nassau	**5.9 (3.9-7.9)**
New York State Total	**9.0 (7.8-10.3)**

Source: 2008-2009 NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)

Table 25. Diabetes Mortality Rate per 100,000

	Deaths				Average population	Crude	Adjusted
Region/County	**2008**	**2009**	**2010**	**Total**	**2008-2010**	**Rate**	**Rate**
Suffolk	195	204	232	631	1,508,016	13.9	12.8
Nassau	175	172	174	521	1,349,529	12.9	9.9
Region Total	370	376	406	1,152	2,857,545	13.4	11.4
New York State Total	3,582	3,684	3,606	10,872	19,469,951	18.6	16.6

Source: 2008-2009 NYS Expanded Behavioral Risk Factor Surveillance System Data as of 2010

Risk factors for the development of diabetes (type 2) include physical inactivity, overweight/obesity, hypertension, history of cardiovascular disease, and belonging to a high-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, and Pacific Islander). Obesity and physical activity are addressed in the health challenges section of this Community Health Assessment on page 106.

Minority populations are at greater risk for heart disease and stroke. According to *Million Hearts*™, African Americans are at almost twice the risk for having a first stroke than Whites. In addition, African Americans and Hispanics are more likely to die following a stroke than are whites. According to the same source, "… individuals with low incomes are much more likely to suffer from high blood pressure, high cholesterol, heart attack, and stroke than their high-income peers."[34] The following table details health indicators by race/ethnicity for individuals in Suffolk County.

Table 26. Suffolk County Health Indicators by Race/Ethnicity, 2008-2010 (NYS DOH)

Health Indicator	Non-Hispanic			Hispanic	Total
	White	Black	Asian/Pacific Islander		
Socio-Demographic Indicators					
Population (2010)	1,079,974	109,090	54,383	246,239	1,493,350
Percent of Population	72.3%	7.3%	3.6%	16.5%	100.0%
Median Annual Household Income in US Dollars (2008-10) *	88,435	69,449	90,005	67,066	84,235
Percent of Families Below Poverty (2008-10) *	2.5%	9.7%	3.9%	8.6%	3.8%
General Health Indicators					
Total Mortality per 100,000, Age-adjusted	681.5	703.1	238.4	433.5	681.0
Percent Premature Deaths (< 75 Years)	36.2%	62.3%	62.3%	61.5%	39.1%
Years of Potential Life Lost per 100,000, Age-adjusted	4,954	7,884	1,945	4,399	5,113
Heart Disease and Stroke Indicators					
Diseases of the Heart Mortality per 100,000, Age-adjusted	204.1	200.5	68.5	109.2	203.2
Diseases of the Heart Hospitalizations per 10,000, Age-adjusted	124.8	142.2	37.9	150.6	134.1
Cerebrovascular Disease (Stroke) Mortality per 100,000, Age-adjusted	26.7	32.6	12.9~	20.6	27.1
Cerebrovascular Disease (Stroke) Hospitalizations per 10,000, Age-adjusted	24.5	35.8	8.9	37.0	27.2
Coronary Heart Disease Mortality per 100,000, Age-adjusted	154.3	160.4	49.7	85.2	153.9
Coronary Heart Disease Hospitalizations per 10,000, Age-adjusted	54.2	51.7	19.6	55.3	57.5
Congestive Heart Failure Mortality per 100,000, 18+ Years	29.2	9.3	5.6~	4.3~	24.1
Congestive Heart Failure Hospitalizations per 10,000, Age 18+ Years	43.2	54.4	6.6	32.0	42.4
Diabetes Indicators					
Diabetes Mortality per 100,000, Age-adjusted	12.3	22.8	9.2~	13.9	12.8
Diabetes Hospitalizations per 10,000 (Primary Dx ICD9 250), Age-adjusted	11.6	37.6	4.1	21.6	14.9
Diabetes Hospitalizations per 10,000 (Any Dx ICD9 250), Age-adjusted	172.7	359.0	66.9	294.2	201.5
Diabetes Short-term Complications Hospitalizations per 10,000, Age 6-18 Years	2.3	3.3	s	2.3	2.4
Diabetes Short-term Complications Hospitalizations per 10,000, Age 18+ Years	2.9	12.7	0.6~	5.1	4.0

Key

Symbol	Meaning
s	Total suppressed for confidentiality
~	Fewer than 20 events in the numerator; therefore the rate is unstable
*	Hispanics are not excluded from the Black and Asian/Pacific Islander categories. Pacific Islanders are not included in the Asian/Pacific Islander category

Cirrhosis

Cirrhosis, a serious condition that causes irreversible scarring of the liver, rarely causes signs and symptoms in its early stages. As with cerebrovascular disease and heart disease, cirrhosis takes a serious toll in Suffolk County. Suffolk County's age adjusted rate for deaths due to cirrhosis was similar to that for neighboring Nassau County during the period of 2008 through 2010; the rate for both of these counties was below that for the New York State total rate during the same period.

Table 27. Adjusted Rates Are Age Adjusted to the 2000 United States Population

Cirrhosis Mortality Rate per 100,000

	Deaths				Average population	Crude	Adjusted
Region/County	2008	2009	2010	Total	2008-2010	Rate	Rate
Suffolk	94	77	101	272	1,508,016	6.0	5.2
Nassau	99	74	87	260	1,349,529	6.4	5.2
Region Total	193	151	188	532	2,857,545	6.2	5.2
New York State Total	1,358	1,272	1,417	4,047	19,469,951	6.9	6.2

Source: NYS DOH Vital Statistics, 2012

Arthritis

Arthritis includes over 120 diseases and conditions that affect joints, surrounding tissues, and other connective tissues. As noted earlier, arthritis is the most common cause of disability among U.S. adults. According to the NYS DOH (May 2013), over 3 million New Yorkers live with the pain of arthritis. The same source cites the following: women make up about 60% of arthritis cases, and nearly half of the elderly population has arthritis. Risk factors include age and obesity.[36] In Suffolk County 30.6% of adults have been told they have some form of arthritis.[6]

Asthma

As seen in the table below, 7.7% of all New York State (NYS) residents live in Suffolk County. In 2010, Suffolk County had fewer black or African American residents, fewer Hispanic/Latino residents and fewer foreign-born residents than NYS as a whole (see Table 28). In 2013 13.6% of

Suffolk County adults report current asthma compared to 10% of all New York State Residents.[6] However, between the years 2008-2010, Suffolk County also had a lower asthma hospital discharge rate, a lower asthma death rate and a lower asthma ER visit rate than NYS as a whole.[37]

Table 28. 2008-2010 Asthma Indicators

	Population	White	Black/African American	Hispanic/ Latino	Foreign Born	Asthma Hospital Discharge Rate (all ages) # and rate/10,000	Asthma Death Rate # and rate per million	ER Visit Rate (all ages) # and rate /10,000 Rate
Suffolk County	1,493,350	80.8%	7.4%	10.5%	16.5%	6,533 14.4	40 8.2	24,061 55.0
New York State	19,378,102	65.7%	15.9%	17.6%	21.8%	117,673 20.4	760 12.0	488,886 87.1

Source: NYSDOH

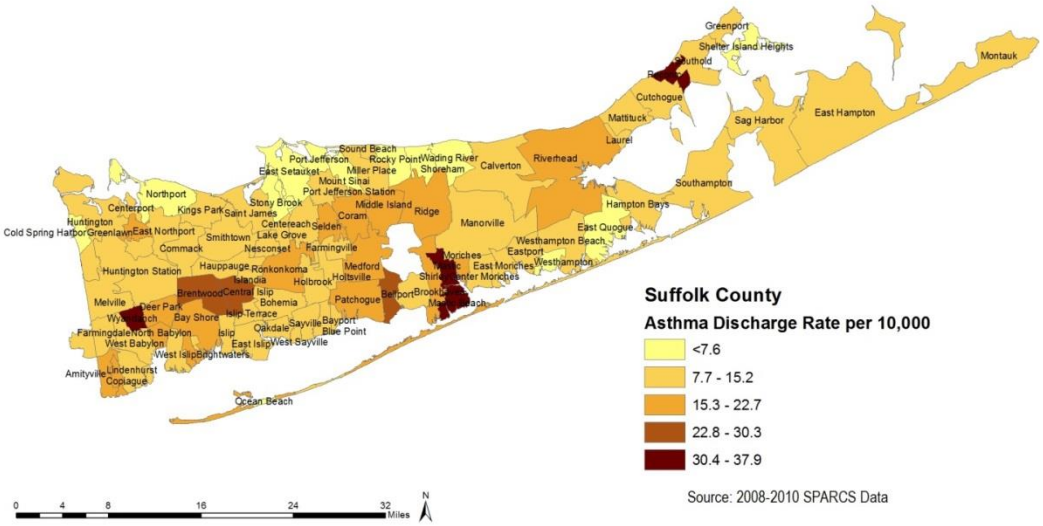


Figure 14. Asthma Hospital Discharge Rates by Zip Code in Suffolk County

However, high concentrations of racial, ethnic and foreign-born populations exist within certain zip codes in Suffolk County. Table 30 (below) shows some key demographics for the zip codes with the ten (10) highest Emergency Room (ER) visit rate (and Hospital Discharges) for asthma/10,000 population for ages 0-4 years.

Table 29.

Zip Code	ER Visit Rate/10,000	Hospital Discharges Rate/10,000	Location	Race	Ethnicity Hispanic/Latino	Food Stamps/SNAP	Foreign Born
11701	346.8	106.9	Amityville	B (AA) = 37.3% W = 48%	21.9%	9.0%	21.8%
11798	327.7	100.6	Wyandanch	B (AA) = 63.4% W = 18.6%	24.5%	16%	25.6%
11713	312.2	79.2	North Bellport	B (AA) = 21.7% W = 62.5%	21.3%	4.2%	9.3%
11722	300	91.2	Central Islip	B (AA)= 24.9% W = 43.7%	52.1%	13.5%	35.6%
11717	298.7	103.9	Brentwood	B (AA) = 16.4% W = 48.4%	68.5%	12.0%	42.5%
11726	237.5	137.8	Copiague	B (AA) = 15.5% W = 62.6%	38.2%	7.4%	34.9%
11950	222.0	90.6	Mastic	B (AA) = 9.2% W = 75.1%	21.9%	4.7%	10.3%
11951	208.3	76.1	Mastic Beach	B (AA) = 9.7% W = 80.0%	16.1%	16.1%	4.9%
11706	193.1	72.2	Bay Shore	B (AA) = 16.1% W = 60.4%	38.5%	7.6%	25.7%
11746	189.1	50.7	Huntington Station	B (AA) = 7.7% W = 73.0%	21.1%	3.9%	21.1%
Suffolk County	134.0	43.2		B (AA) = 7.4% W = 80.8%	16.5%	4.2%	14.2%
New York State	221.4	45.7		B (AA) = 15.9% W = 65.7%	17.6%	12.3%	21.8%

Table 30 (below) shows some key demographics for the zip codes with the ten (10) highest Emergency Room (ER) visit rate (and Hospital Discharges) for asthma/10,000 population for all ages.

Table 30.

Zip Code	ER Visit Rate/10,000	Hospital Discharges Rate/10,000	Location	Race	Ethnicity Hispanic/Latino	Food Stamps/SNAP	Foreign Born
11798	177.3	37.9	Wyandanch	B (AA)= 63.4% W = 18.6 %	24.5%	16%	25.6%
11713	127.9	28.2	North Bellport	B(AA) = 21.7% W = 62.5%	21.3%	4.2%	9.3%
11722	118.9	27.6	Central Islip	B(AA) = 24.9% W = 43.7%	52.1%	13.5%	35.6%
11950	117.4	37.4	Mastic	B(AA) = 9.2% W = 75.1%	21.9%	4.7%	10.3%
11951	108.5	32.2	Mastic Beach	B(AA) = 9.7% W = 80.0%	16.1%	16.1%	4.9%
11706	92.4	22.7	Bay Shore	B(AA) = 16.1% W = 60.4%	38.5%	7.6%	25.7%
11901	86.7	20.8	Riverhead	B(AA) = 14.1% W = 70.0%	24.1%	9.6%	19.1%
11967	80.9	17.2	Shirley	B(AA) = 7.0% W = 82.0%	16.7%	4.3%	11.5%
11763	75.9	19.1	Medford	B(AA) = 9.6% W = 79.3%	18.8%	6.8%	11.8%
11784	72.1	21.1	Selden	B(AA) = 3.5% W = 86.2%	13.1%	5.3%	12.3%
11704	63.9	14.5	West Babylon	B(AA) = 13.2% W = 77.3%	12.8%	4.2%	13.3%
Suffolk County	55.8	14.4		B(AA) = 7.4% W = 80.8%	16.5%	4.2%	14.2%
New York State	87.1	20.1		B(AA) = 15.9% W = 65.7%	17.6%	12.3%	21.8%

For the purposes of this community health assessment, high ER visit rates will be used as a surrogate marker for poorly controlled asthma.

Wyandanch (zip code # 11798) has the second highest asthma ER visits for ages 0-4 years (372.7 compared with 134.00 for Suffolk County) and the highest asthma ER visits or all ages (177.3

compared with 55.8 for Suffolk County), indicating that the rate of poorly controlled asthma in Wyandanch exceed the rate of poorly controlled asthma in Suffolk County as a whole.

Looking in detail at Wyandanch one can see that with a total population of 15,347 (Suffolk County = 1,493,350) Wyandanch's residents are 63.4% white (Suffolk County = 80.8%); 18.6% black or African American (Suffolk County = 7.4%); 24.5% Hispanic or Latino (Suffolk County = 16.5%) and 25.6% foreign-born (Suffolk County = 14.2%). Thus, Wyandanch's demographics differ markedly from Suffolk County as a whole.

The data on Table 29 and Table 30 provide a snapshot of the ten areas with the poorest asthma control in Suffolk County. All of these areas tell a similar story of demographic data that differs markedly from that of Suffolk County as a whole and represent specific groups of persons with poorly controlled asthma the SCDHS attempts to reach through the SCDHS-health center network.

Cancer

Cancer, is a leading cause of death in New York State, second only to heart disease. One in two men and one in three women will be diagnosed with cancer at some point over their lifetime.

The overall age adjusted cancer death rate in Suffolk County, based on 2007-2009 cancer registry data (as of July 2012), is 170.6 per 100,000, which is higher than the Healthy People 2020 objective of 160.6 deaths per 100,000.[38]

Suffolk County also has a higher death rate due to melanoma than the Healthy People 2020 objective (3.1 deaths per 100,000 compared to 2.4 deaths per 100,000).[13]

Based on data reported by the New York State Cancer Registry, the average annual number of cancer cases reported in Suffolk County (2006-2010) for all invasive cancers were approximately 8,900, and the average number of deaths each year over the same time period were approximately 2,800 (see Table 31). As illustrated by the data presented in these tables, men typically have a higher incidence and mortality rate compared to women. In Suffolk County, for all invasive cancers, the incidence rate per 100,000 males was 627.8 (95% C.I. +/- 8.3), as compared to woman, with an incidence rate of 498.6 per 100,000 (95% C.I. +/- 6.7). The mortality rate for men and women was 201.7 (95% C.I. +/- 4.9) and 156.0 per 100,000 (95% C.I. +/- 3.7), respectively (see Table 32).[38]

Table 31: Cancer Incidence and Mortality for Suffolk County, 2006-2010

Site of Cancer	Incidence						Mortality					
	Males			**Females**			**Males**			**Females**		
	Average Annual Cases	Rate per 100,000 Males	95% CI (+/-)	Average Annual Cases	Rate per 100,000 Females	95% CI (+/-)	Average Annual Deaths	Rate per 100,000 Males	95% CI (+/-)	Average Annual Deaths	Rate per 100,000 Females	95% CI (+/-)
All Invasive Malignant Tumors	4517.6	627.8	8.3	4407.0	498.6	6.7	1367.0	201.7	4.9	1427.0	156.0	3.7
Oral cavity and pharynx	120.4	15.4	1.3	55.8	6.4	0.8	19.2	2.8	0.6	9.2	1.0	0.3
Esophagus	69.4	9.7	1.0	22.4	2.5	0.5	59.2	8.3	1.0	17.6	1.9	0.4
Stomach	75.6	10.7	1.1	41.6	4.6	0.6	32.4	4.8	0.7	19.0	2.1	0.4
Colorectal	387.4	55.1	2.5	393.4	43.2	1.9	135.6	20.1	1.5	136.0	14.3	1.1
Colon excluding rectum	273.6	39.5	2.1	295.2	32.2	1.7	110.6	16.5	1.4	116.4	12.2	1.0
Rectum & rectosigmoid	113.8	15.6	1.3	98.2	11.0	1.0	25.0	3.6	0.7	19.6	2.1	0.4
Liver / intrahepatic bile duct	81.8	10.7	1.1	29.4	3.2	0.5	49.8	6.7	0.8	27.8	3.1	0.5
Pancreas	114.0	16.2	1.4	127.4	13.9	1.1	93.6	13.3	1.2	100.2	10.8	1.0
Larynx	44.4	6.0	0.8	16.2	1.8	0.4	14.0	2.0	0.5	4.4	0.5	0.2
Lung and bronchus	566.2	81.5	3.1	622.2	69.4	2.5	369.6	53.9	2.5	391.8	43.4	1.9
Melanoma of the skin	232.6	32.3	1.9	159.8	18.8	1.3	34.6	4.9	0.7	19.2	2.1	0.4
Female breast				1235.0	139.8	3.5				215.6	23.5	1.4
Cervix uteri				68.0	8.4	0.9				17.2	1.9	0.4
Corpus uterus and NOS				267.2	29.6	1.6				43.0	4.8	0.6
Ovary				128.2	14.5	1.1				72.6	8.1	0.8
Prostate	1299.6	174.3	4.3				119.8	19.5	1.6			
Testis	49.8	7.0	0.9				1.6	0.2	0.2			
Urinary bladder (incl. in situ)	339.2	49.5	2.4	109.8	12.1	1.0	58.2	9.2	1.1	23.0	2.4	0.4
Kidney and renal pelvis	190.8	25.7	1.7	116.0	13.2	1.1	33.0	4.8	0.7	24.0	2.6	0.5
Brain and other nervous system	62.6	8.6	1.0	47.2	5.8	0.7	39.4	5.4	0.8	23.4	2.7	0.5
Thyroid	80.4	10.6	1.1	221.4	27.5	1.6	4.6	0.7	0.3	4.2	0.4	0.2
Hodgkin lymphoma	25.8	3.6	0.6	25.6	3.4	0.6	3.2	0.5	0.2	3.2	0.4	0.2

Non-Hodgkin lymphomas	194.0	27.2	1.7	171.6	19.4	1.3	53.2	7.8	1.0	47.4	5.2	0.7
Myeloma	63.8	9.0	1.0	56.0	6.2	0.7	26.8	4.0	0.7	24.6	2.7	0.5
Leukemias	150.6	21.2	1.5	104.4	11.9	1.0	65.2	9.8	1.1	43.8	4.8	0.6

Source: New York State Cancer Registry, http://www.health.ny.gov/statistics/cancer/registry/vol1/v1csuffolk.htm
Notes: Incidence data are provisional, November 2012. Rates are per 100,000 persons, age-adjusted to the 2000 US standard population, with 95% confidence intervals. Rates based on fewer than 4 cases or deaths per year are unstable and should be used with caution. NOS = Not otherwise specified

Figure 14 illustrates how the incidence of cancer in Suffolk County compares to the incidence in other counties in New York State. As depicted in this figure, the incidence rate in Suffolk County is higher than many other counties, the state as a whole and the national average. Interestingly, as shown in Figure 15, Suffolk County fairs better when comparing the annual death rate due to cancer than many other counties in New York State. However, the death rate is still above Healthy People 2020 Goal of reducing the overall cancer death rate to 160.6 per 100,000.[13]

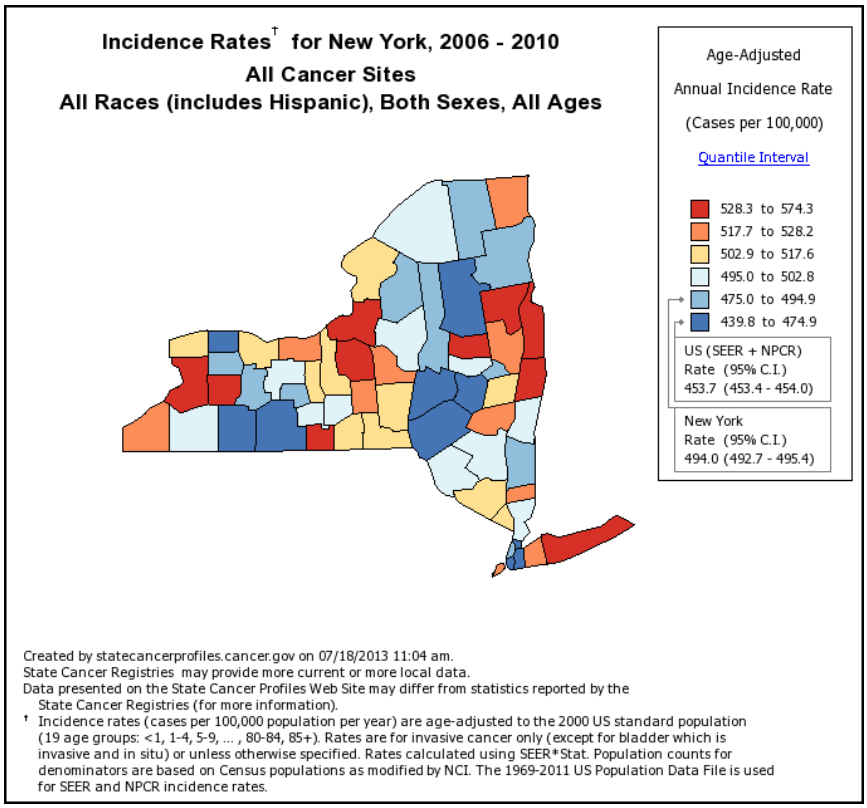


Figure 14.

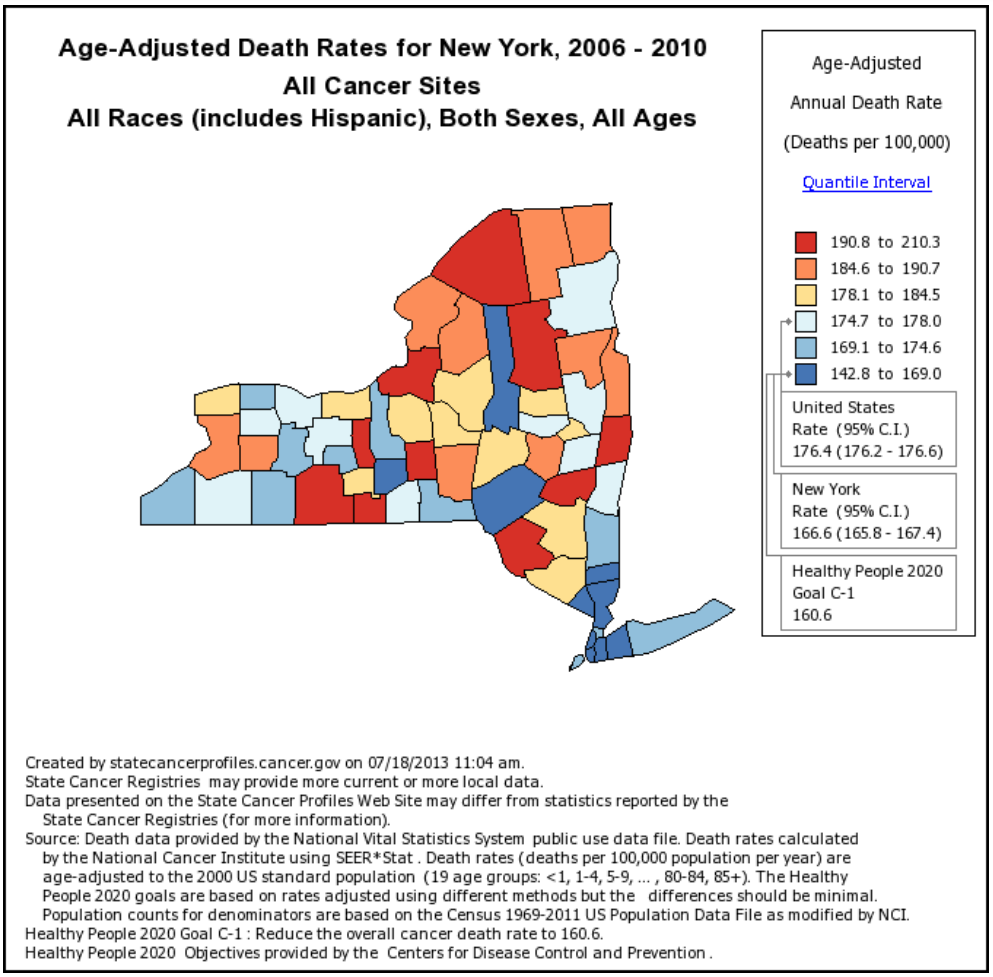


Figure 15.

As described in the American Cancer Society 2012 report, "*The Cancer Burden in New York State*", four cancers represent approximately fifty percent of the new cases and the deaths each year in both Suffolk County and the state as a whole. These cancers are lung and bronchus, colorectal, female breast and prostate.[39] As evidenced by the data in Table 32, in Suffolk County, lung and bronchus, colorectal and prostate cancer represent approximately 49.9 percent of the average annual cancer cases (2006-2010) and approximately 45.7 percent of all deaths in men. In women, lung and bronchus, colorectal and breast cancer represent approximately 51.1 percent of the average annual cancer cases (2006-2010) and approximately 52.1 percent of all deaths. Similarly, the data for New York State indicate that lung and bronchus, colorectal and prostate cancer represent approximately 51.1 percent of the average annual cancer cases (2006-2010) and approximately 47.2 percent of all deaths in men. In women in New York State, lung and bronchus, colorectal and breast cancer represent approximately 50.2 percent of the average annual cancer cases (2006-2010) and approximately 49.5 percent of all deaths. As illustrated in Figure 16, during the time period from 2006 to 2010, the mortality rates for these four cancers have declined. In New York State, colorectal cancer mortality has declined 3.7 percent, lung and

bronchial cancer by 1.5 percent, prostate cancer by 3.7 percent and female breast cancer by 2.6 percent.[40]

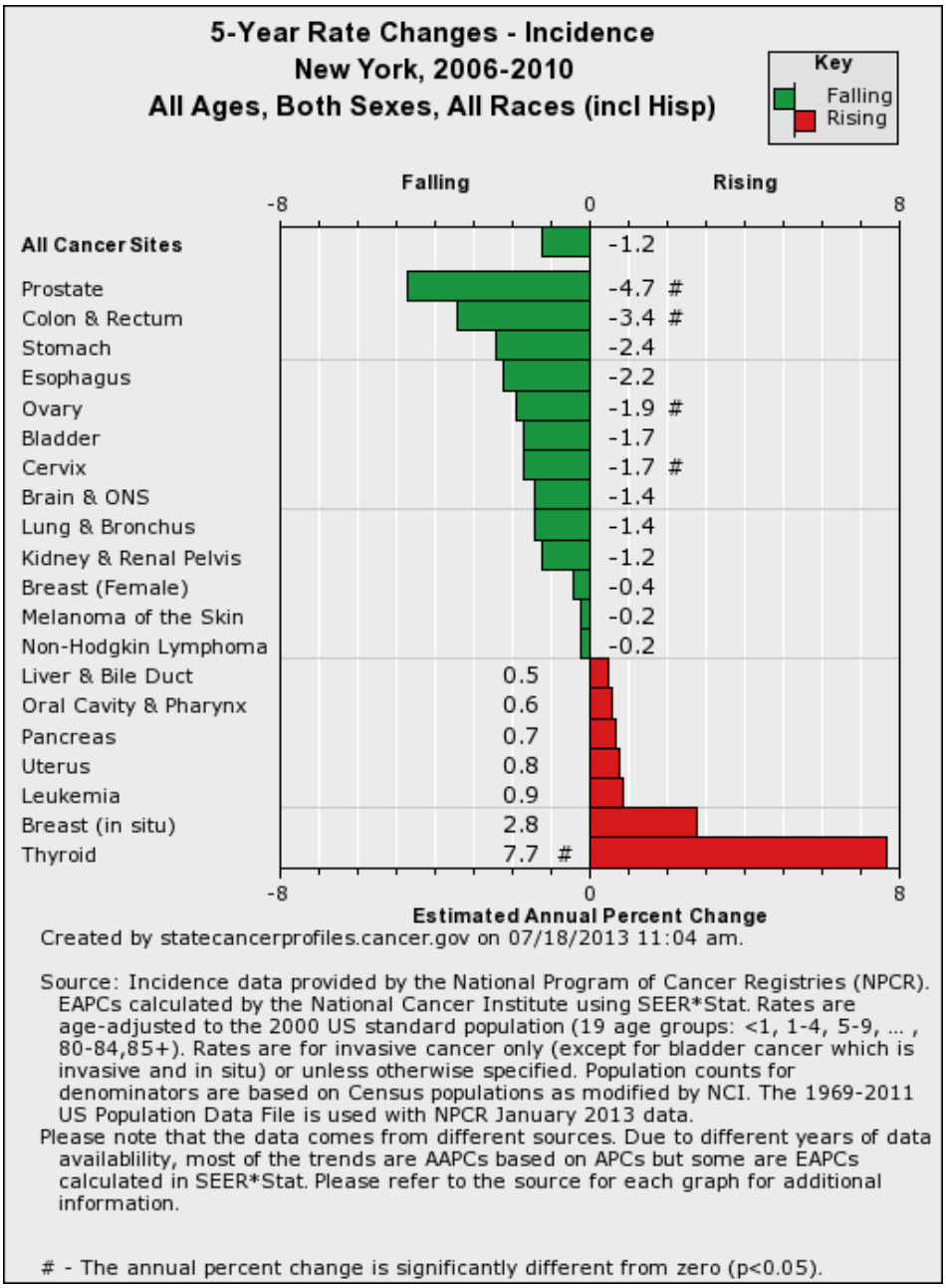


Figure 16.

The Suffolk County data indicates that in men, the five most common cancers are:

- prostate (28.8%)
- lung and bronchus (12.5%)
- colorectal (8.6%)
- urinary bladder (7.5%)
- melanoma (5.2%).

In terms of average annual deaths, the data from Suffolk County for men indicate that the cancers that are responsible for the most deaths are:

- lung and bronchus (27.0%)
- colorectal (9.9%)
- prostate (8.8%)
- pancreas (6.9%)
- leukemia (4.8%).

For women in Suffolk County, the five most common cancers are:

- breast (28.0%)
- lung and bronchus (14.1%)
- colorectal (8.9%)
- uterus (6.1%)
- thyroid (5.0%).

The cancers that are responsible for the most deaths in females in Suffolk County are:

- lung and bronchus (27.5%)
- breast (15.1%)
- colorectal (9.5%)
- pancreas (7.0%)
- ovarian (5.1%).

Table 32, demonstrates the differences in incidence and mortality rates based on gender and ethnicity for various cancers.

Table 32. Cancer Rate in Suffolk County BY Race 2006-2010

Site of Cancer	Race/Ethnicity	Incidence rate per 100,000		Mortality Rate Per 100,000	
		Male	Female	Male	Female
Lung	White	82.9	71.8	54.7	44.6
	Black	77.7	51.1	56.1	36.4
	Hispanic	40.4	25.9	26.1	16.6
	Non-Hispanic	84.2	72.4	55.8	45.4
Colorectal	White	54.9	43.5	19.6	14.1
	Black	60.0	43.4	32.7	19.6
	Hispanic	53.6	32.5	17.9	14.5
	Non-Hispanic	55.3	43.9	20.3	14.4
Breast	White		142.8		23.5
	Black		120.7		27.1
	Hispanic		82.3		13.0
	Non-Hispanic		145.1		24.3
Prostate	White	171.5		18.5	
	Black	242.9		43.5	
	Hispanic	125.7		12.1	
	Non-Hispanic	178.2		19.9	
Pancreas	White	16.2	13.9	13.4	10.8
	Black	16.5	16.8	11.5	12.8
	Hispanic	11.8	13.6	6.3	7.4
	Non-Hispanic	16.5	14.0	13.8	11.0
Thyroid	White	11.1	29.3	0.7	0.4
	Black	5.2	10.2	0.5	0.8
	Hispanic	4.4	20.2	1.7	0.0
	Non-Hispanic	11.5	28.7	0.7	

Source: New York State Cancer Registry

Table 33: Source: Percent of Cancers Diagnosed at an Early Stage in Suffolk County, 2006-2010: (Source: New York State Cancer Registry)

	Male							
	Oral	**Colorectal**	**Lung**	**Melanoma**	**Prostate**	**Testis**		
Suffolk County	28.0	44.1	20.2	82.1	84.9	69.7		
New York State	28.0	45.6	24.3	81.8	87.1	72.5		
	Female							
	Oral	**Colorectal**	**Lung**	**Melanoma**	**Breast**	**Cervix**	**Uterus**	**Ovarian**
Suffolk County	43.1	43.1	24.2	85.7	64.2	45.4	69.5	17.4
New York State	49.0	44.6	27.7	86.7	62.8	48.0	71.9	19.2

Incidence data are provisional, November 2012.
Based on tumors with known stage at diagnosis.
Early stage cancers are those which are confined to the organ of origin at diagnosis.

Lung Cancer

Lung cancer is responsible for more deaths not only in Suffolk County but also nationwide.[41] As of 2009, the age-adjusted incidence rate for lung and bronchus cancer in Suffolk County stands at 72.5 per 100,000 and the age-adjusted mortality rate from lung cancer per 100,000 is 45.3. Lung and bronchus cancer are the leading causes of cancer deaths for both men (53.9 per 100,000 men) and women (43.4 per 100,000 women). Since 2006, the lung and bronchus cancer death rate increased in males from 47.7 per 100,000 males, and declined in females from a rate of 53.3 per 100,000 women. However, the female death rate from lung and bronchus cancer is higher than the corresponding death rates at both the state (35.8) and national (39.2) level.[38] The overall Healthy People 2020 Goal is 45.5 deaths per 100,000 people.[12] There is no statistical difference between the incidence of lung and bronchial cancer in white and black men in Suffolk County, though the incidence in white women is statistically greater than black women. Similarly, the death rate in Suffolk County due to cancer of the lung and bronchus is similar for white and black men, and the death rate in white women is statistically similar to black women. This disparity in cancer of the lung and bronchus is more apparent statewide, as a statistically greater incidence and death rate in white men compared to black men is also apparent. Data indicate that the incidence and death rate of lung and bronchial cancer in Hispanic men and women are significantly lower than non-Hispanics in Suffolk County as well as in New York State. Many lung cancer cases could be prevented through the elimination of exposure to tobacco smoke, either

directly through smoking or indirectly through inhaling secondhand smoke. Exposure to radon gas in the home is another risk factor for lung cancer, as is asbestos, and ionizing radiation. This incidence and death toll due to lung cancer, highlights the importance of the Department's tobacco education and cessation programs, discussed further in this report. Detection of lung cancer at an early stage of disease will improve outcome. Based on data from the New York Cancer Registry, 24.3 percent of lung cancers were detected at an early stage in Suffolk County, compared to 20.2 statewide (see Table 33).

Colorectal Cancer

When looking at cancers affecting both men and women, colorectal cancer is the second leading cause of cancer deaths in Suffolk County and New York State in general. The current death rate for colorectal cancer, based on data from the New York Cancer Registry from 2006-2010, is 20.1 (95% C.I. +/- 1.5) and 14.3 per 100,000 (95% C.I. +/- 1.1) for men and women, respectively. Thus, the death rate in men has exceeded the Healthy People 2020 goal of 14.5 deaths per 100,000.[13] Hispanic women have a significantly lower incidence rate of colorectal cancer than non-Hispanic women, though death rates are not significantly different. Black women have similar incidence rates of colorectal cancer to Whites and Non-Hispanics, however, the mortality rates are higher.

There are opportunities for preventing colorectal cancer. According to the Centers for Disease Control and Prevention, most colorectal cancers start from precancerous growths. Therefore, screening to detect these growths or polyps is an effective tool to prevent colorectal cancer from occurring.[42] In fact, the CDC estimates that six out of ten colorectal deaths could be prevented if men and women 50 years and older were screened routinely. Based on data from the New York Cancer Registry, 45.6 percent of colorectal cancers were detected at an early stage in Suffolk County, compared to 44.1 statewide (Table 33). Additional lifestyle factors that reduce the risk of getting colon cancer include increasing physical activity, eating a diet full of fruits and vegetables, limiting alcohol and avoiding tobacco. Suffolk County also has a higher colorectal cancer death rate than the Healthy People 2020 objective (16.8 per 100,000 versus 14.5 per 100,000). In Suffolk County, the percentage of adults (greater than 50 years of age) who have had either a home blood stool test within the last year, or a sigmoidoscopy or colonoscopy within the last ten years was 66.4 percent in 2009 (age adjusted) but according to the most recent BRFSS survey as compared to the Healthy People 2020 objective of 70.5 percent.[4,13]

Breast Cancer

According to the data from the New York Cancer Registry provided in Tables 33, breast cancer is the most common cancer in women in Suffolk County and New York State in general, with 1235.0 and 14,604.4 average annual cases, respectively. According to the CDC, breast cancer is second to lung cancer as the leading cause of cancer death in women.[38] Breast cancer death rates in general are declining, however, the death rate of 23.5 per 100,000 (95% C.I. +/- 1.4) based on data from

2006-2010 is still above the Healthy People 2020 goal of 20.6 deaths per 100,000 females.[13] In addition, disparities still exist. The CDC reports that black women who have breast cancer are forty percent more likely to die from the disease than white women.[43] In New York State the differences are less dramatic. The New York State data indicate that the death rate for white women is 22.1 per 100,000 (95% C.I. +/- 0.4) while for black women it is 25.5 per 100,000 (95% C.I. +/- 1.0). In Suffolk County, the differences in death rate for white and black women are not statistically different. Interestingly, Hispanic women have a lower incidence and death rate than non-Hispanic women in both Suffolk County and New York State in general. According to the CDC, the disparity in death rates between black and white women can be partially attributed to black women having breast cancers that are more aggressive and harder to treat, as well as the possibility that black women may have fewer social and economic resources and be less likely to get prompt care following an abnormal mammogram.[43]

The CDC acknowledges that mammograms are the best way to detect breast cancer early when it is easier to treat.[43] In Suffolk County, 62.8 percent of breast cancer cases are diagnosed at an early stage, as compared to 64.2 percent for New York State in general, based upon data available from the New York State Cancer Registry. Death rate due to breast cancer is also higher than the Healthy People 2020 objective (22.5 per 100,000 compared to 20.6 per 100,000, age adjusted). This can partly be addressed by efforts to increase breast cancer screening, especially in African American women and other minority populations. According to the Expanded Behavior Risk Factor Surveillance System (BRFSS), 80.5 percent of women over 40 years of age had a mammogram in the past two years, though the results were better in the 50-64 age group with 82 percent.[4] The Healthy People 2020 objective is 81.1 percent of 50 to 74 year old women receiving a mammogram within the last two years.[13]

Prostate Cancer

Prostate cancer is the most common cancer in men.[44] Prostate cancer represents approximately 28.8 percent of all cancer cases in men Suffolk County each year, though it only represents approximately 8.8 percent of all male cancer deaths. According to the New York State Cancer Registry, 87.1 percent of the prostate cancers are detected at an early stage in Suffolk County, 84.9 percent statewide. Healthy People 2020 has set an objective of reducing the prostate cancer death rate to 21.2 deaths per 100,000 males. Overall Suffolk County has met that objective with a prostate cancer death rate of 19.5 per 100,000 (95% C.I. +/- 1.6). However, when these rates are examined by race and ethnicity, it appears that black men do not fare as well as their white counterparts. As shown in Table 34, both the incidence and death rate for black men in Suffolk County is higher than the incidence and death rate in white men. The CDC acknowledges that certain races have a higher risk of prostate cancer though the reasons for this are not known at this time.[44] Other risk factors include age, and family history.

Pancreatic Cancer

Pancreatic cancer is one of the most deadly forms of cancer in the U.S. It is the fourth leading cause of death due to cancer.[45] In Suffolk County the incidence in men is 16.2 per 100,000 (95% C.I. +/- 1.4) and the incidence in women is 13.9 per 100,000 (95% C.I. +/- 1.1) (Table 31). Though pancreatic cancer represents approximately 2.5 to 3 percent of the cancers in men and women, respectively, it represents approximately 7 percent of all cancer deaths in both men and women. A review of the data do not indicate many statistical differences in the incidence and death rates of pancreatic cancer between whites, and blacks, though male Hispanics did have a statistically lower death rate than non-Hispanic men (6.3 per 100,000, 95% C.I. +/- 3.9, as compared to 13.8 per 100,000, 95% C.I. +/- 1.3. Risk factors for pancreatic cancer include cigarette smoking, which accounts for 25-30 percent of the cases, obesity, which increases an individual's risk by 20 percent, heredity, diabetes and history of pancreatitis.[45]

Thyroid Cancer

Thyroid cancer incidence rates have increased significantly in the U.S. during the time period 1999-2008. This rising trend has been noted in both men and women and across all racial and ethnic groups, though it is more notable in women in the age group 55-64.[44] As shown in Figure 16, in New York State the incidence rate of thyroid cancer has increased 7.7 percent during the time period 2006 to 2010. In Suffolk County, the annual incidence rate in men is 10.6 per 100,000 (95% C.I. +/- 1.1), which is significantly lower than the incidence rate in women (27.5 per 100,000, 95% C.I. +/- 1.6). A comparison of the data indicate that black men and women in Suffolk County have a statistically lower incidence, than white men and women, though no differences in death rate are apparent. It is also interesting to note that there is an area in Suffolk County that has a higher than expected incidence of thyroid cancer compared to the rest of the state. This area extends approximately from Smithtown on the west to Port Jefferson to the north, to Patchogue to the south and Ridge to the east. According to the American Cancer Society, some studies suggest that the increasing trend in the incidence of thyroid cancer may be due to better detection, while other studies suggest there may be another cause, not yet identified. Risk factors for thyroid cancer include ionizing radiation, and thyroid conditions such as goiter and benign nodules.

Liver & Bile Duct Cancer

There are two cancers in which the mortality rate has been increasing in New York State. These are liver and bile duct, and cancer of the uterus. As can be seen from Figure 3, death rates for liver and bile duct cancer have increased 2.1 percent in New York State during the time period of 2006 to 2010. New York State is not unique. According to the American Cancer Society's most recent publication of Cancer Facts and Figures, the incidence of liver cancer has been increasing since 1992. Death rates have risen 2.2 percent in men during the time period 2004 to 2008, while they were stable in women. Incidence and mortality rates for liver cancer are twice as high in men as they are in women.[45] In Suffolk County, the incidence rate of liver and bile duct rate in men and

women (2006-2010) was 10.7 per 100,000 (95% CI +/-1.1), and 3.2 per 100,000 (95% CI +/-0.5), respectively based on data from the New York State Cancer Registry (see Table 31). Liver and bile duct cancers represent approximately 1.8 percent of the average annual cancer cases in men and 0.7 percent of the average annual cancer cases in women in Suffolk County. In terms of mortality, liver and bile duct cancers represent approximately 3.6 percent of all cancer deaths in men in Suffolk County, based on the data from the same time period, with a death rate of 6.7 per 100,000 (95% CI +/-0.8). In women, liver and bile duct cancers represent approximately 2.0 percent of all cancer deaths in Suffolk County, with a death rate of 3.1 per 100,000 (95% CI +/-0.5).

According to the American Cancer Society, hepatitis C is the most common cause of hepatocellular carcinoma in the United States, though worldwide, hepatitis B is the most common cause. [46] Since hepatitis B and C can spread from person to person through sharing hypodermic needles and through unprotected sex, many cases could be prevented. In addition, a vaccine to prevent hepatitis B, though not hepatitis C, infection is available. Other risk factors include chronic alcohol abuse, obesity, Type 2 diabetes, certain inherited metabolic disorders, and exposure to aflatoxins, arsenic, anabolic steroids, vinyl chloride, and thorium dioxide.[46]

Uterine Cancer

The death rates for cancer of the uterus have increased 0.5 percent during the time period 2006-2010 in New York State (see Figure 16). Most cancers of the uterus begin in the endometrium and are called endometrial carcinomas. The disease is rarely observed in women younger than 40. Though the incidence is typically higher in white women than black, black women are more likely to die from it than white women.[47] The data from New York State illustrate this observation. In white women in New York State, the incidence of uterine cancer was 30.8 per 100,000 (95% CI +/-0.5), which was statistically higher than the incidence in black women (28.4 per 100,000; 95% CI +/-1.1). The death rate in whites was statistically lower, though, than in blacks (4.6 per 100,000; 95% CI +/-0.2 for white women and 8.4 per 100,000; 95% CI +/-0.6 for black women). However, in Suffolk County, the incidence of uterine cancer is not statistically different between white (29.9 per 100,000; 95% CI +/-1.7) and black women (30.7 per 100,000; 95% CI +/-6.8), nor are the death rates statistically different (4.5 per 100,000; 95% CI +/-0.7 for white women, compared to 8.5 per 100,000; 95% CI +/-3.6 for black women). Risk factors that increase a woman's chance of getting uterine cancer include: Obesity, high-fat diet, lack of physical exercise, and estrogen hormone replacement therapy among others.

Childhood Cancer

Cancers in children are different in many ways than adult cancers. Childhood cancers are often the result of damage to DNA that likely takes place very early in life, perhaps even before birth. Therefore, unlike many cancers that occur in adults, childhood cancers are not strongly linked to lifestyle or environmental risk factors. Childhood cancers comprise less than one percent of all the

cancers diagnosed in the United States each year. Though more than eighty percent of children who have cancer now survive five years or more, cancer is still the second leading cause of death in children younger than 15 years.[48] In New York State, each year, on average, there are 943.0 cases of cancer in children between the ages of 0-19 years of age, based on data from the New York State Cancer Registry (2006 to 2010), for a rate of 188.5 per 1,000,000 (95% CI +/-5.4). For the same age group in Suffolk County, the average annual number of cases is 79.0, with a rate of 196.6 per 1,000,000 (95% CI +/-19.4), which is not significantly different than the overall New York State rate. Figure 17, generated from New York State Cancer Registry data available on the Cancer Control Planet website, shows childhood cancer rates among the counties across New York State. According to the American Cancer Society, the most common childhood cancers are leukemia, brain and other nervous system tumors, neuroblastoma, Wilms tumor, lymphoma, rhabdomyosarcoma, retinoblastoma and bone cancer. The childhood cancer with the highest incidence in New York State are the leukemias, with an average annual number of cases of 239.8 (ages 0-19), the highest incidence rate occurring between the ages of 0 to 4 years (87.1 per 1,000,000) (see Table 34).

Table 34: Childhood Cancer Incidence, New York State, 2006-2010

Site of Cancer	Ages 0-4		Ages 5-9		Ages 10-14		Ages 15-19		Combined Ages 0-14			Combined Ages 0-19		
	Avg Annual Cases	Rate per 1,000,000	Avg Annual Cases	Rate per 1,000,000	Avg Annual Cases	Rate per 1,000,000	Avg Annual Cases	Rate per 1,000,000	Avg Annual Cases	Rate per 1,000,000	95% CI (+/-)	Avg Annual Cases	Rate per 1,000,000	95% CI (+/-)
All Invasive Malig Tumors	280.8	242.5	149.4	128.8	186.8	149.8	326.0	236.3	617.0	172.5	6.1	943.0	188.5	5.4
Leukemias	100.8	87.1	48.8	42.1	42.0	33.7	48.2	34.9	191.6	53.8	3.4	239.8	49.0	2.8
Lymphoid leukemias	77.2	66.7	39.8	34.3	26.2	21.0	23.8	17.3	143.2	40.3	3.0	167.0	34.5	2.3
Acute myeloid leukemia	13.8	11.9	4.4	3.8	8.6	6.9	11.6	8.4	26.8	7.4	1.3	38.4	7.7	1.1
Lymphomas & reticuloendothelial neoplasms	13.0	11.2	18.6	16.0	36.0	28.9	79.6	57.7	67.6	18.8	2.0	147.2	28.6	2.1
Hodgkin lymphoma	0.8	0.7	4.6	4.0	18.4	14.8	49.8	36.1	23.8	6.6	1.2	73.6	14.0	1.4
Non-Hodgkin lymphomas	12.0	10.4	14.0	12.1	17.4	13.9	29.0	21.0	43.4	12.2	1.6	72.4	14.4	1.5
CNS & misc intracranial & intraspinal neoplasms	48.6	42.0	43.4	37.4	36.4	29.2	34.6	25.1	128.4	36.1	2.8	163.0	33.3	2.3
Ependymomas &choroid plexus tumor	6.0	5.2	3.2	2.8	2.6	2.1	3.0	2.2	11.8	3.3	0.8	14.8	3.0	0.7
Astrocytoma	24.4	21.1	22.6	19.5	22.0	17.6	18.0	13.0	69.0	19.4	2.0	87.0	17.8	1.7
Intracranial & intraspinal embryonal tumors	11.8	10.2	8.8	7.6	4.0	3.2	3.6	2.6	24.6	6.9	1.2	28.2	5.8	1.0
Other gliomas	5.0	4.3	8.2	7.1	6.6	5.3	8.2	5.9	19.8	5.6	1.1	28.0	5.7	0.9

Neuroblastoma & other peripheral nervous cell tumors	35.0	30.2	4.4	3.8	2.0	1.6	1.4	1.0	41.4	11.5	1.6	42.8	8.9	1.2
Neuroblastoma & ganglioneuroblastoma	35.0	30.2	4.4	3.8	1.6	1.3	1.0	0.7	41.0	11.4	1.6	42.0	8.7	1.2
Retinoblastoma	17.2	14.9	0.8	0.7	0.0	0.0	0.0	0.0	18.0	5.0	1.0	18.0	3.7	0.8
Renal tumors	26.4	22.8	5.2	4.5	2.6	2.1	3.2	2.3	34.2	9.6	1.4	37.4	7.8	1.1
Nephroblastoma & other nonepithelial renal tumors	26.4	22.8	4.6	4.0	0.8	0.6	0.4	0.3	31.8	8.9	1.4	32.2	6.7	1.0
Hepatic tumors	9.8	8.5	0.8	0.7	1.6	1.3	2.2	1.6	12.2	3.4	0.8	14.4	2.9	0.7
Hepatoblastoma	9.6	8.3	0.4	0.3	0.6	0.5	0.2	0.1	10.6	2.9	0.8	10.8	2.2	0.6
Malignant bone tumors	1.6	1.4	8.4	7.2	18.6	14.9	20.6	14.9	28.6	8.0	1.3	49.2	9.7	1.2
Osteosarcoma	0.2	0.2	4.6	4.0	11.2	9.0	12.8	9.3	16.0	4.5	1.0	28.8	5.7	0.9
Ewing tumor & related sarcomas of bone	1.2	1.0	3.2	2.8	4.8	3.8	4.8	3.5	9.2	2.6	0.7	14.0	2.8	0.7
Soft tissue & other extraosseous sarcomas	16.6	14.3	10.8	9.3	16.0	12.8	25.2	18.3	43.4	12.1	1.6	68.6	13.7	1.4
Rhabdomyosarcoma	10.0	8.6	5.6	4.8	4.8	3.8	4.8	3.5	20.4	5.7	1.1	25.2	5.2	0.9
Germ cell & trophoblastic tumors & gonadal neoplasms	8.2	7.1	3.0	2.6	10.4	8.3	40.6	29.4	21.6	6.0	1.1	62.2	11.9	1.3
Intracranial & intraspinal germ cell tumor	1.2	1.0	0.8	0.7	4.6	3.7	4.0	2.9	6.6	1.8	0.6	10.6	2.1	0.6
Malignant gonadal germ cell tumor	2.2	1.9	1.8	1.6	5.4	4.3	29.8	21.6	9.4	2.6	0.7	39.2	7.4	1.0
Other malignant epithelial neoplasms & malignant melanomas	2.4	2.1	5.2	4.5	20.4	16.4	69.6	50.4	28.0	7.7	1.3	97.6	18.5	1.6
Thyroid carcinoma	0.2	0.2	1.6	1.4	9.2	7.4	36.8	26.7	11.0	3.0	0.8	47.8	9.0	1.1
Malignant melanoma	1.0	0.9	2.4	2.1	3.4	2.7	11.4	8.3	6.8	1.9	0.6	18.2	3.5	0.7
Other & unspecified malignant neoplasms	1.2	1.0	0.0	0.0	0.8	0.6	0.8	0.6	2.0	0.6	0.3	2.8	0.6	0.3

Source: New York State Cancer Registry, http://www.health.ny.gov/statistics/cancer/registry/table7/tb7anys.htm

Notes: Incidence data are provisional, November 2012. Rates are per 1,000,000 children. Rates for 0-14 and 0-19 year age intervals are age-adjusted within these intervals to the 2000 US standard population, with 95% confidence intervals. Rates based on fewer than 4 cases per year are unstable and should be used with caution. Non-Hodgkin lymphomas, Burkitt, and miscellaneous lymphomas are grouped together

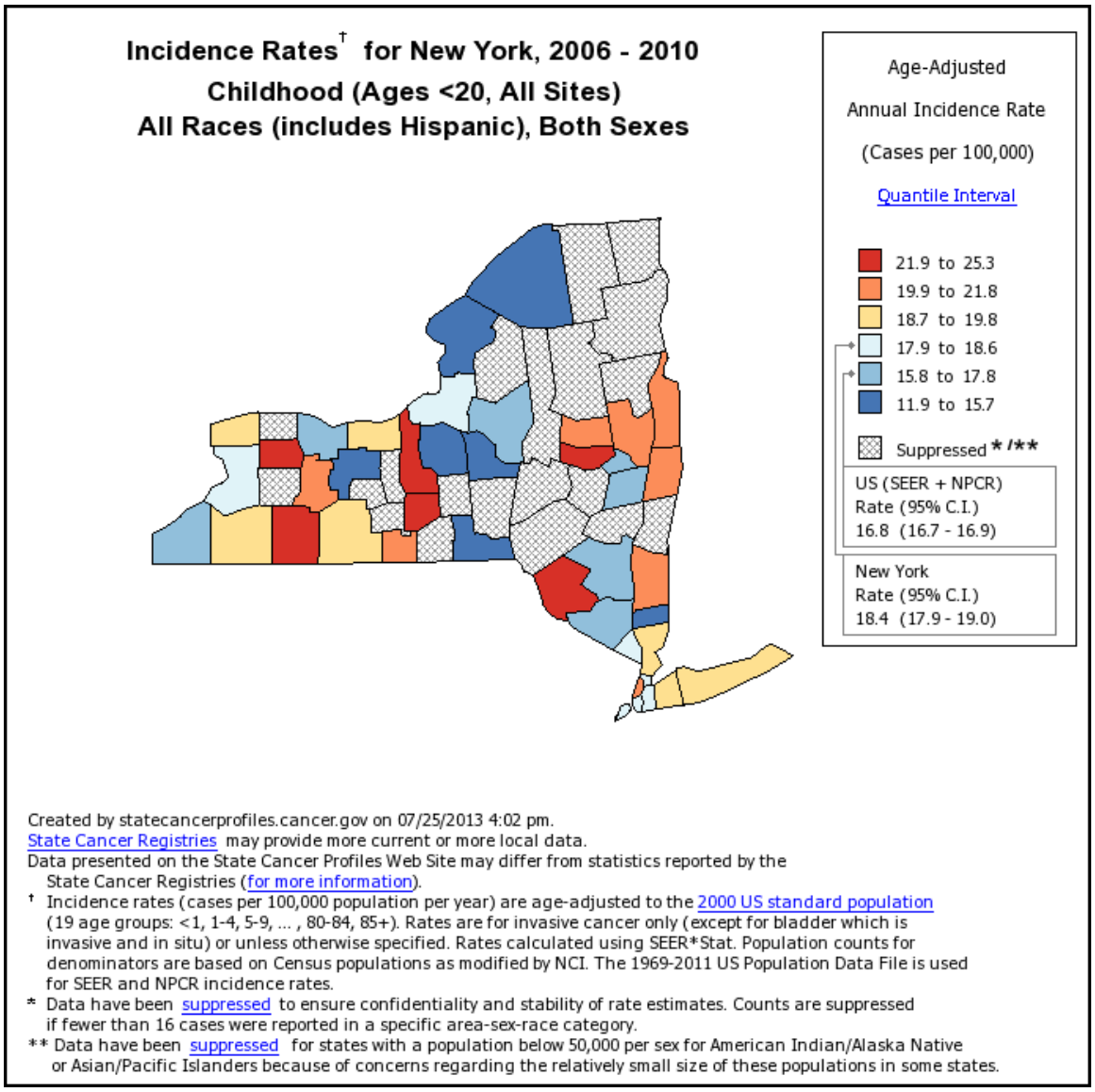


Figure 17.

Cancer Disparities

According to the New York State Department of Health Cancer Registry data, cancer incidence rates are highest among whites (includes Hispanics) in New York State (509.0 per 100,000; 95% C.I. 507.4, 510.5) and Suffolk County (549.0 per 100,000; 95% C.I. 543.6, 554.4), followed by blacks (including Hispanic) (453.7 per 100,000; 95% C.I. 450.2, 457.1 for New York State and 476.6 per 100,000; 95% C.I.456.4, 497.4 for Suffolk County). Hispanics had a lower cancer incidence rate (415.2 per 100,000; 95% C.I. 411.3, 419.1 for New York State and 457.4 per

100,000; 95% C.I. 438.5, 476.9 for Suffolk County).[49] Incidence data are useful to track, however; it is often valuable to compare death rates among different populations to observe potential differences in access to adequate cancer care. In Suffolk County, though the incidence rates are highest in white populations, death rates are highest in blacks, as is the case in New York State as a whole. The death rate in whites for both sexes combined in Suffolk County is 175.7 per 100,000 (95% C.I. 172.7, 178.8), compared to blacks which is 189.7 (95% C.I. 176.4, 203.7). These racial differences are more pronounced when comparing death rates in white and black males (202.6 per 100,000; 95% C.I. 197.6, 207.7 for white males compared to 238.7 per 100,000; 95% C.I. 214.5, 264.7 for black males in Suffolk County). In addition, the overall cancer death rates for whites in Suffolk County are declining, though for black males it is reported as being stable.[48] Some of these differences could be due to access to care disparities.

Comparing the stage of diagnosis for specific cancers by race or ethnicity provides insight on the disparities in Suffolk County. For example, black women (non-Hispanic) have the highest female breast cancer death rate (28.8 per 100,000), followed by white women (non-Hispanic) (23.1 per 100,000) and Hispanic women (12.2 per 100,000). In addition, they have the lowest percentage of breast cancers diagnosed at an early stage (48.7 compared to 63.4 for white women and 50.6 for Hispanic women) (Table 35). According to the American Cancer Society, later stage of diagnosis in black women is mostly due to fewer women receiving mammograms, or a longer duration between screenings, as well as a lack of timely follow up when suspicious results are detected. In addition, it appears that a more aggressive form of breast cancer may be more common in black women than in white women.[50] Similarly, for cervical cancer, 33.3 percent are diagnosed at an early stage in black women, while 45.0 percent in white and 58.8 percent in Hispanic women are diagnosed early. For colorectal cancer, blacks again have the lowest percentage of cases diagnosed at an early stage. For blacks, 41.6 percent were diagnosed at an early stage, while for whites and Hispanics, 45.4 and 47.7 percent were diagnosed at an early stage, respectively.[51]

Table 35: Suffolk County Health Indicators by Race/Ethnicity, 2008-2010

Health Indicator	Non-Hispanic			Hispanic	Total
	White	**Black**	**Asian/Pacific Islander**		
Cancer Indicators					
Lung Cancer Incidence per 100,000, Age-adjusted (2007-09)	78.7	62.2	27.1	25.0	73.1
Colorectal Cancer Mortality per 100,000, Age-adjusted (2007-09)	16.8	24.7	5.6~	14.3	16.8
Female Breast Cancer Mortality per 100,000, Age-adjusted (2007-09)	23.1	28.8	14.1~	12.2	22.5
Cervix Uteri Cancer Mortality per 100,000, Age-adjusted (2007-09)	1.6	5.6~	s	s	1.9
Percent Early Stage Colorectal Cancer (2007-09)	45.5%	41.6%	58.8%	47.7%	45.7%
Percent Early Stage Female Breast Cancer (2007-09)	63.4%	48.7%	75.8%	50.6%	62.1%
Percent Early Stage Cervical Cancer (2007-09)	45.0%	33.3%~	s	58.8%	47.3%

Source: New York State Department of Health , http://www.health.ny.gov/statistics/community/minority/county/suffolk.htm

Key

Symbol	Meaning
s	Total suppressed for confidentiality
~	Fewer than 20 events in the numerator; therefore the rate is unstable
*	Hispanics are not excluded from the Black and Asian/Pacific Islander categories. Pacific Islanders are not included in the Asian/Pacific Islander category

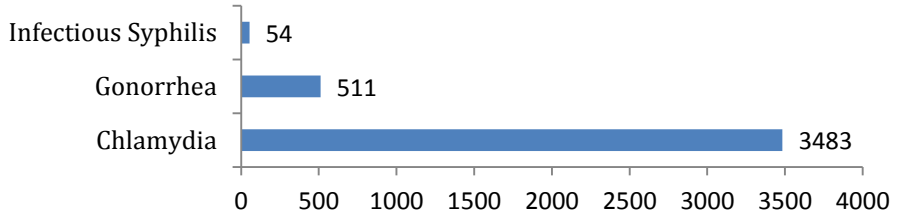
Public Health-Communicable Diseases

Epidemiology staff at Suffolk County Department of Health processed 32,867 communicable disease reports in 2012. Staff investigated 8,240 individual disease cases, excluding chronic Hepatitis B and C case numbers.

Sexually Transmitted Diseases/Infections (STD/STI)

In 2012, approximately 7,500 laboratory reports were received prompting investigations regarding sexually transmitted disease such as syphilis, gonorrhea, chlamydia, chancriod, lymphogranuloma venereum (LGV). Approximately 4,200 infections were identified and reported to the New York State Health Department. Figure 18. Below is a graph with the incidence of chlamydia, gonorrhea and early syphilis (infectious) cases for 2012 (est.), taken from the New York State Health Information Network. The remaining cases (191) reported were non-infectious syphilis cases that had no documentation of prior treatment in the past, but received treatment in 2012 and 240 HIV reports received for Partner (notification) Services. There were no chancriod or LGV cases identified in 2012.

Figure 18. Est. 2012 Suffolk County STD Cases



Chlamydia

Genital infections due to *C. trachomatis* are the most common bacterial sexually transmitted syndrome in the Unites States. Many infections, about 70%, remain asymptomatic.[52] Most symptomatic infections result in urethritis in men and cervicitis in women. *Chlamydia*, the leading cause of infertility, is preventable and easily treated with antibiotics. In addition, *Chlamydia* infections predispose non-pregnant women to acute pelvic inflammatory disease and increase the risk of tubular pregnancy in later years. Infection in pregnant women may result in premature labor/birth, perinatal infection of the infant or puerperal infection for the mother. As per www.prevention.org , 50% of pregnant women with untreated chlamydia transmit the infection to their infants. All pregnant women should be screened for *Chlamydia* at their first prenatal visit. Today, it is the most commonly reported STD in Suffolk County. In 2009, Suffolk County reported the highest number of cases in the Metropolitan area, excluding New York City, reporting 3344

cases with a rate of 235.6 per 100,000 population.[53] Over 85% of reported *Chlamydia* infections in Suffolk County occurred in persons <29 years old. A mapping of *Chlamydia* infections in females between 10-19 conducted by NY State DOH (2006-2007) revealed 2 Suffolk County School Districts ranking 3rd and 5th in the Metropolitan Area having high number of cases, Brentwood 186/5582 (3.3%) confirmed cases and Riverhead 60/1948 (3%) confirmed cases.

Table 36.

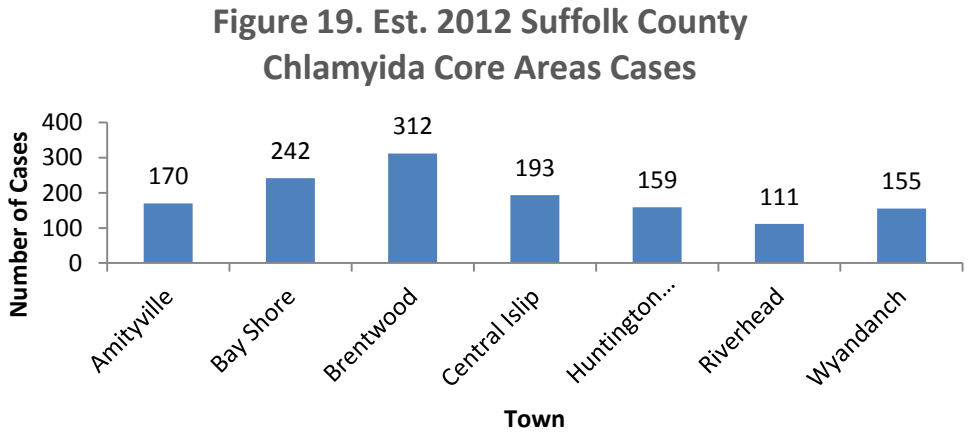
Chlamydia Case by Year -Suffolk County rate per 1.5 million Suffolk residents		
Year	Cases	Rate per 100,000
2009 (1.4 mil population)	3344	235.6
2010 *	3387*	225.8*
2011 *	3534*	235.6*
2012 est.	3477	231.8

* Data not yet published

Chlamydia by Age Group (male & female) -Suffolk County-2012*		
10-14 yr. old	19	17.76
15-19 yr. old	985	917.66
20-29 yr. old	1946	Not Available

*Data not yet published

Areas of high concentration (also known as core areas) for Chlamydia include Amityville 11701, Bay Shore 11706, Brentwood 11717, Central Islip 11752, Huntington Station 11746, Wyandanch 11798 and Riverhead 11901. These areas make up 39% (1342/3483) of Suffolk County Chlamydia morbidity (2012 est.); however these towns only represent 14% (209,156/1.5) of the population.[1]



Other high risk areas include: West Babylon 11704, Bellport 11713, Copiague 11726, Coram 11727, Huntington 11743, Lindenhurst11757, Patchogue 11772, West Islip11795, Mastic 11950, Mastic Beach 11951 and Shirley 11967. These areas make up 35% (869/3483) of the county Chlamydia morbidity and 16.6% of the population (249,100/1.5).[1] The remaining 26% of Chlamydia infections are scattered throughout Suffolk County.

Gonorrhea

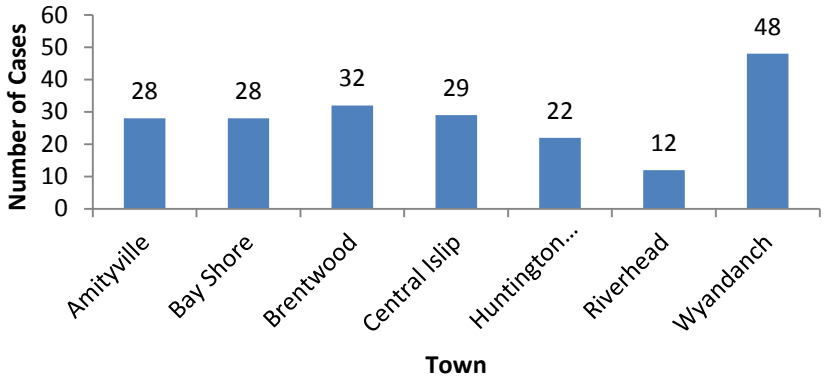
Neisseria gonorrhoeae (Gonorrhea) caused by the gram-negative diplococcus also can cause cervicitis, urethritis and pelvic inflammatory disease (PID). Gonorrhea infection can also be found in the pharynx, rectum, conjunctivae and joints. According to NYS DOH data, in 2009 Suffolk County exceeded the Healthy People 2010 objective of 19 cases per 100,000. Suffolk County reported 33 cases per 100,000.[13, 53] Suffolk County continues to experience a relatively steady rate of gonorrhea. This rate has remained consistent over the past four years with an average of 467 cases per year at a rate of 31% per 100,000 population. Of the 511 total cases identified in 2012, the highest incidence was in the 20-29 year old group 265/511(52%). The second most affected group was 15-19 year olds 107/511 (21%).

Table 37. Gonorrhea Case by Year- Suffolk County rate per 1.5 million Suffolk residents

Year	Cases	Rate per 100,000
2009	474	31.6
2010 not yet published	337	22.47
2011 not yet published	547	36.47
2012 est.	511	34.07

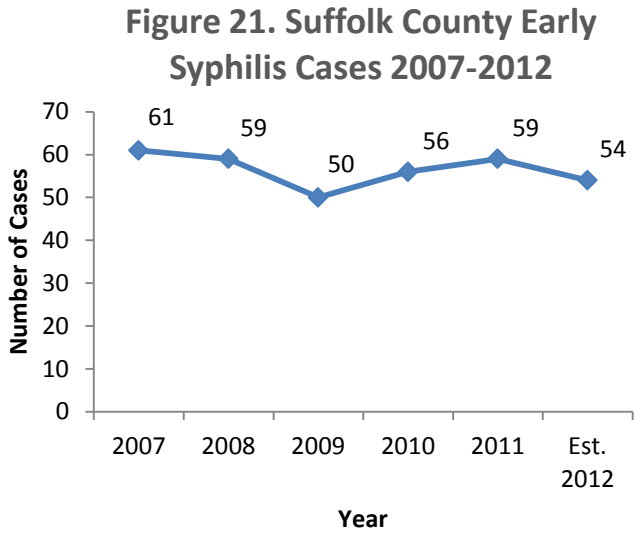
Areas of high concentration for gonorrhea infection (also known as core areas) include: Amityville 11701, Bay Shore 11706, Brentwood 11717, Central Islip 11722, Huntington Station 11746, Wyandanch 11798, and Riverhead 11901. These areas make up 199/511 39% of reported case in Suffolk County morbidity; however they only account for 14% (209,156/1.5) of the population (Census 2010 data). Other high risk areas and rates include Bellport, Copiague, Huntington, Medford, Patchogue, and Mastic Beach. These areas make up 14.7% (75/551) of the morbidity and 6.1% (91,975/1.5) of the population. The remaining 46% of the gonorrhea infections are scattered throughout Suffolk County.

Figure 20. Est. 2012 Suffolk County Gonorrhea Core Areas Cases



Syphilis

Syphilis remains one of the most complex sexually transmitted disease due to its effect on perinatal morbidity and mortality, its association with HIV transmission, the long-term devastating cardiovascular and neurologic effects if left untreated or treated incorrectly and the fact that it is preventable. Syphilis is described as Early and Late depending on the stage at the time of diagnosis. Early syphilis represents the actual incident rate as the disease is newly acquired. From 1997 through 2003, Suffolk County reported an average of 13 cases of early syphilis per year. From 2004-2007, Suffolk County reported an average of 37 cases of early syphilis per year. From 2008 to 2012 the average number of cases reported per year was 55.6, a case rate of 3.7 per 100,000. The Healthy People 2010 objective for primary and secondary syphilis was 0.2 cases per 100,000 population. In 2009 Suffolk County reported 13 cases of primary and secondary (infectious syphilis) cases with a rate of 0.9 per 100,000 population. In addition, according to the NY State Bureau of STD Control, Suffolk County reported the second highest number of early syphilis cases (50) in the Metropolitan area in 2009.



In 2012, Suffolk County reported 28 Primary and Secondary cases of syphilis. Of those, 26 were reported in men. Eleven cases were reported in men between the ages of 20-29 years old. In addition, of all the "Early" cases of syphilis reported in men, 41/51 reported having sex with another male partner.

Suffolk County Cases Sex of Sex Partner by Syphilis Stage, 2012			
2012	Primary	Secondary	Early Latent
Cases	10	18	26
Cases Among Men	10	16	25
Cases Among MSM	6	15	20

Human Immunodeficiency Virus

There are 34 million people living with HIV worldwide, of whom 1.3 million live in the United States.[54] In the U.S. 1 in 5 people infected with HIV do not know their status. With over 128,000 people living with HIV or AIDS, New York has the highest HIV/AIDS population in the country.[55] Long Island, New York has the highest number of AIDS cases of any suburban United States area.[56]

At the end of 2010, there were 4,502 cumulative AIDS cases reported in Suffolk since the start of the epidemic. In Suffolk County in 2010, there were 2,956 people reported living with HIV or AIDS with 118 newly diagnosed HIV cases in Suffolk County that year, more than any other county in New York outside of NYC.[57] Fortunately, the incidence rate of HIV cases continues to decline from 8.6 per 100,000 in 2007 to 7.8 per 100,000 in 2010. Similarly, the incidence rate of AIDS cases also decreased, from 7.2 per 100,000 persons in 2007 to 4.3 per 100,000 in 2010.[2]

The most common risk factor for transmission is men having sex with men (MSM). Looking at cumulative AIDS cases (since the start of the epidemic), IV drug use is the 2nd most common risk factor. However, heterosexual contact is the 2nd most common risk factor for newly diagnosed HIV and AIDS cases (Fig. 22). This is new since the last community health assessment, when the 2nd most common mode of transmission for newly diagnosed HIV cases was unknown.[57] This may be due to a new category of female transmission, "female presumed heterosexual contact" (FPHC).

Men still account for the majority of newly diagnosed HIV and AIDS cases in Suffolk County (Figure 23). MSM are most at risk, accounting for 57% of newly diagnosed HIV cases and 49% of newly diagnosed AIDS cases.[57] The CDC noted an increase in the number of infections diagnosed from 2008-2011 in adult and adolescent males attributed to male to male sexual contact.[58] Unfortunately, up to 44% of HIV infected men do not know their HIV status. The highest prevalence of men unaware of their HIV status is among adolescent and minority MSM.[59]

Average Annual Newly Diagnosed HIV Cases by Transmission Category 2009-2011, Suffolk County

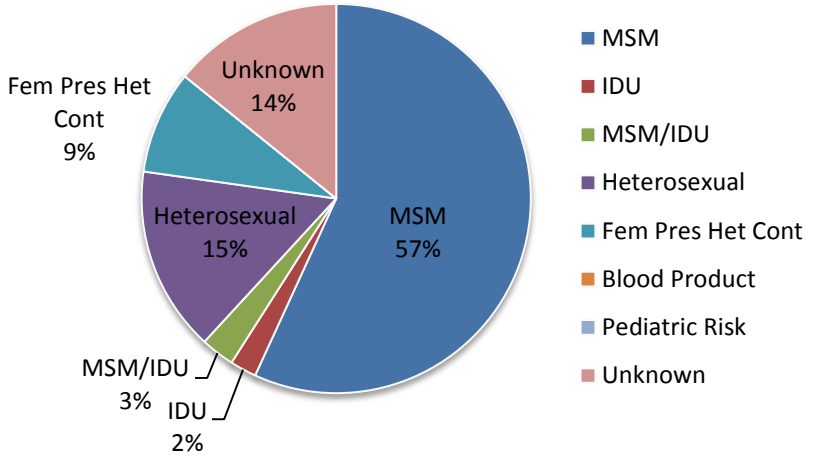


Figure 22a. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health
*No new HIV cases reported due to Blood Products or Pediatric Risk

Average Annual Newly Diagnosed AIDS Cases by Transmission Category 2009-2011, Suffolk County

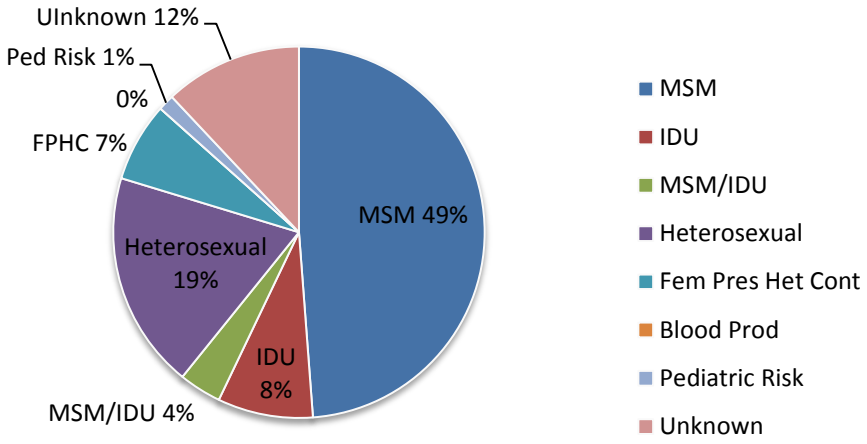


Figure 22b. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health
* No new AIDS cases reported due to Blood Products

Average Newly Diagnosed Cases by Gender 2009-2011, Suffolk Count

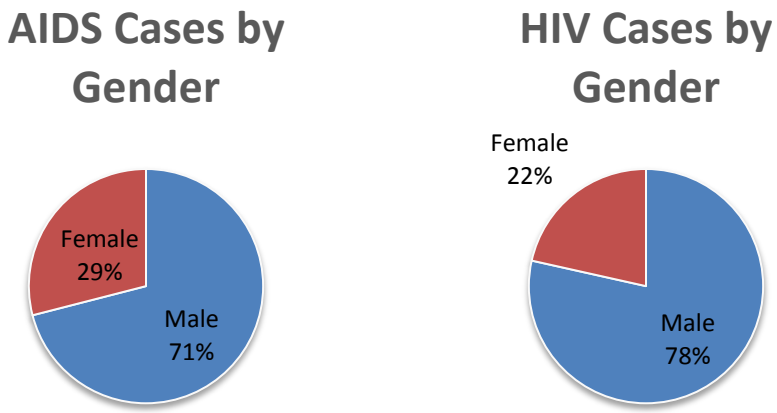


Figure 23. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health

For women in Suffolk County, the major risk factor for HIV/AIDs transmission remains heterosexual sex. Heterosexual sex is responsible for 54% of newly diagnosed HIV and AIDS cases among women (Fig.24). A new risk category "female presumed heterosexual contact" encompasses women, with no indication of injection drug use, who have not denied heterosexual contact and transmission does not fit any other category; their risk would previously have been classified as unknown. The addition of this category increases the number

of women whose risk is heterosexual to 94% of newly diagnosed HIV cases and 78% of newly diagnosed AIDS cases from 2009-2011.[60]

Newly Diagnosed Male Cases by Risk Factor 2009-2011, Suffolk County

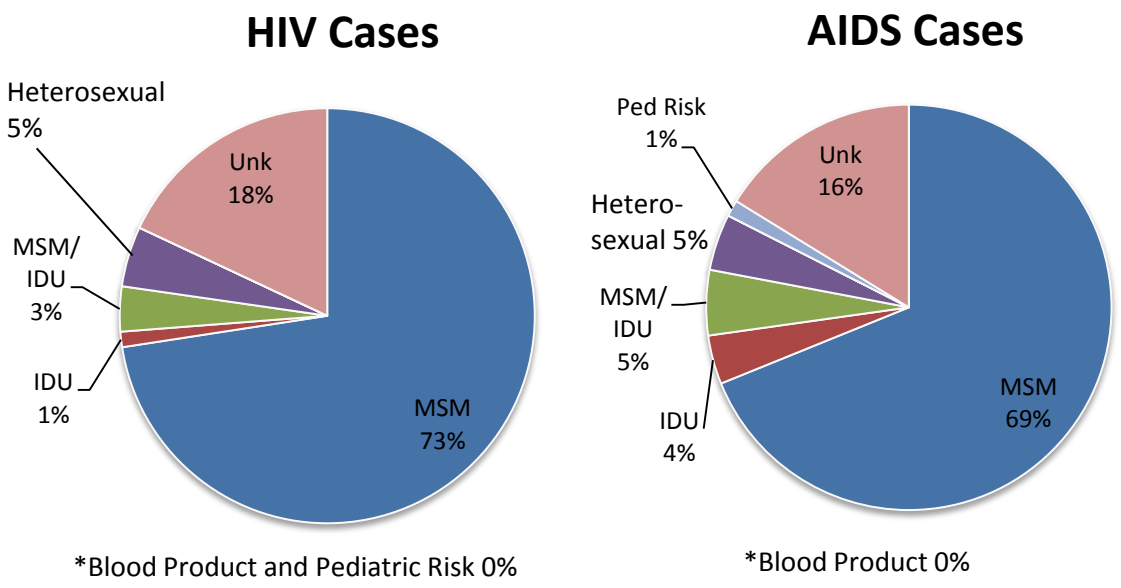


Figure 24a. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health

Newly Diagnosed Female Cases by Risk Factor 2009-2011, Suffolk County

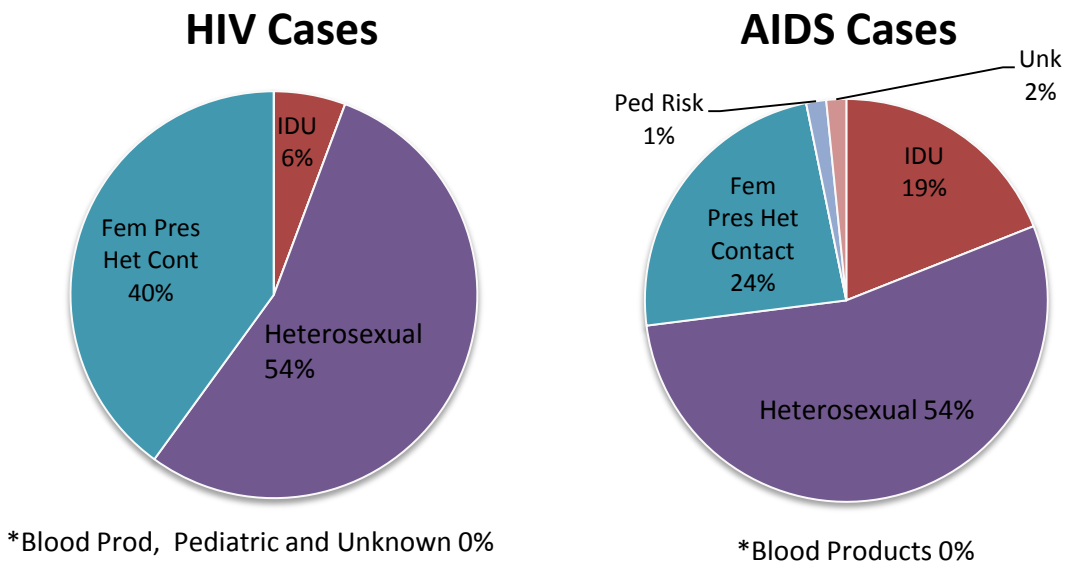


Figure 24b. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health

In Suffolk County, the HIV/AIDS epidemic disproportionately affects minority populations (Figure 25). Though Black/African Americans only make up 7.4% of the population of Suffolk County, they account for 25-28% of newly diagnosed HIV/AIDS cases in this region. Similarly, Hispanic/Latinos make up 16.5% of the population of Suffolk County, they account for 30% of newly diagnosed HIV/AIDS cases.[1, 57]

From 2009-2011 in Suffolk County, there were no newly diagnosed HIV or AIDs cases in children under the age of 12 and no reported HIV cases due to pediatric risk. During this time period, 30 percent of newly diagnosed people with HIV in Suffolk County were in their 20's. This represents an increase from 17 percent in 2004-2006, and is consistent with an increase seen around the country according to the CDC.[58] In the same time period, there was no change in the fact that most newly diagnosed people with AIDS were in their 40's (Figure 26). From 2008-2011, there was an average of 38 deaths per year among persons living with AIDS in Suffolk County, excluding state prison inmates.[6]

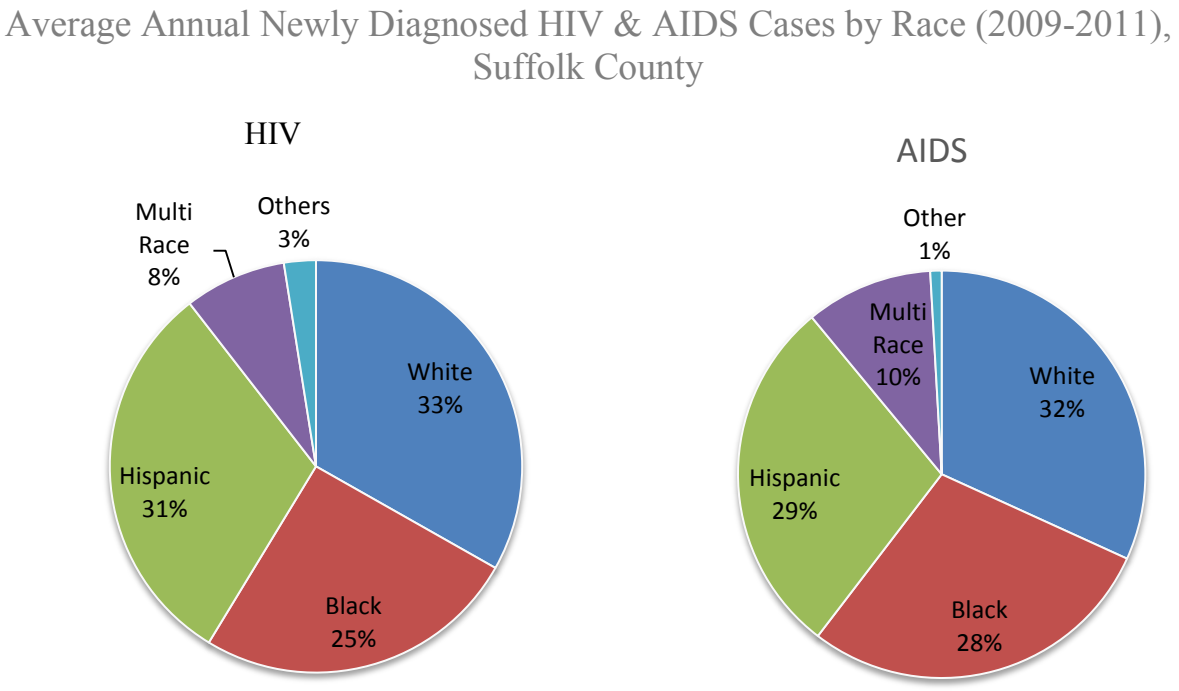


Figure 25. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health

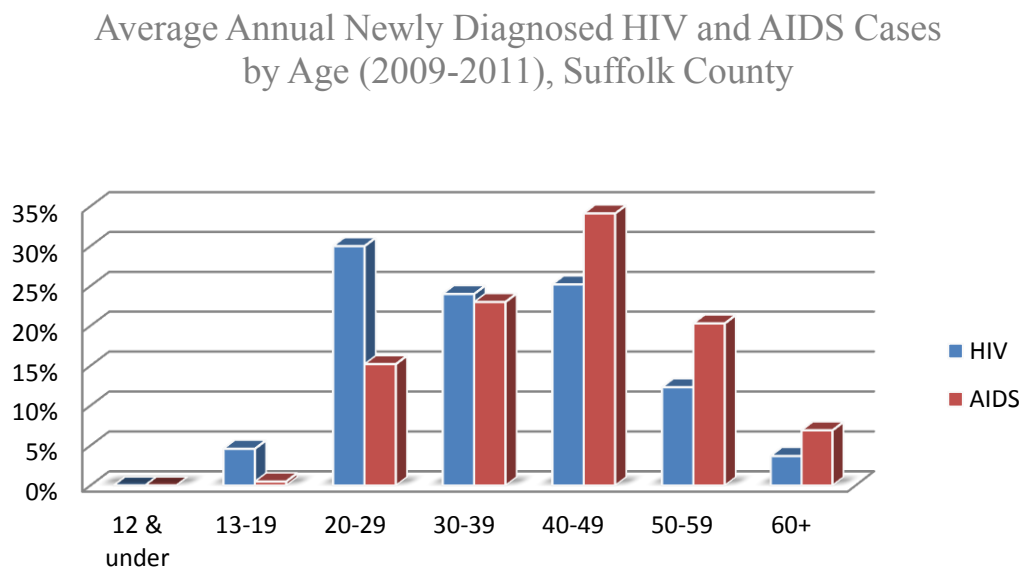


Figure 26. Source: Bureau of HIV/AIDS Epidemiology, New York State Department of Health
* There were no newly Diagnosed HIV or AIDS cases amongst children under 12

Tuberculosis

Suffolk County consistently reports the highest or second highest number of TB cases of any county in New York State outside of New York City (NYC) and for the past decade has had a higher incidence of TB cases per 100,000 population than New York State (NYS) as a whole (not including NYC).

Table 38. Tuberculosis Cases

Year	# Suffolk County TB Cases	Suffolk County TB Incidence/100,000	NYS (not including NYC) TB Incidence/100,000
2003	61	4.3	3.1
2004	44	3.1	3.0
2005	50	3.5	2.8
2006	55	3.7	2.9
2007	45	3.1	2.4
2008	63	4.2	2.8
2009	51	3.4	2.2
2010	40	2.7	2.2
2011	43	2.9	2.0
2012	33	2.2	Not Available

Although the Suffolk County TB control program serves all 1,494,434 residents of Suffolk County, Foreign-Born Persons from High TB-Prevalence Countries are a high risk population for exposure to or infection with TB.

Between 2008 and 2012, 75 % (172/230) of Suffolk County's TB cases occurred in foreign-born persons from high TB prevalence countries.

The following were the top seven countries of origin for foreign-born persons diagnosed with TB disease in Suffolk County between the years 2008-2012 (total Suffolk County TB cases 2008-2012 = 230 TB cases):

Table 39. Foreign Born Persons with TB Diagnosed in Suffolk County

Country of Origin	Number of Cases	% of SC Cases
El Salvador	24	10 %
Guatemala	13	6 %
India	12	5 %
Ecuador	12	5 %
Peru	11	5 %
Honduras	10	4 %
Pakistan	10	4 %

Contacts to Infectious TB Cases identified through contact investigations are another high risk population for exposure to or infection with TB. Contact investigation of a TB case usually results in identifying 7-10 close contacts. Among close contacts, up to 30% may have latent TB infection (LTBI), and up to 1% to 3% may have TB disease. The prevalence of TB disease among close contacts is estimated to be 1,000/100,000 population (< 200-fold higher than in the general US population). Between 2006 and 2012, 21 cases of TB disease were identified by the SC TB control program through its contact investigations.

Between April 2006 and March 2013, the SC TB control program identified 7,446 contacts to infectious TB cases of whom 5,631/7,446 (76%) were evaluated, 4,787/5,631 (85%) were tested; 533/4,787 (11%) were found to be newly positive reactors, 795/5,631 (14%) were previously positive reactors and 21 had TB disease.

Table 40. TB Contact Investigations

	# Contact Investigations/Source Case Investigations	# Contacts Identified	# Contacts Evaluated (%)	# Contacts Tested (%)	# Contacts Newly Positive (%)	# Contacts Previously Positive (%)	# New Cases of TB Found
7-year Totals	352/9	7,446	5,631/7,446 (76%)	4,787/5,631 (85%)	533/4,787 (11%)	795/5,631 (14%)	21 (0.4%)

Vaccine Preventable Disease

There are 17 major vaccine preventable diseases; Diphtheria, Hepatitis A, Hepatitis B, Haemophilus Influenza Type B (Hib), Human Papillomavirus, Influenza, Measles, Meningococcal, Mumps, Pertussis, Pneumococcal, Polio, Rotavirus, Rubella, Shingles, Tetanus, and Varicella.

Since 2008 New York State has required use of the New York State Immunization Information System (NYSIIS), which requires reporting of all immunizations in this registry. The NYSIIS records immunizations of 19-35 month old children to determine their immunization status. The aim of health people 2020 is to have 90% of children fully immunized with 4 DTaP (Diphtheria-Tetanus-Acellular Pertussis), 3 IPV (Inactivated Polio Vaccine), 1MMR (Measles-Mumps-Rubella), 3 Hib (Haemophilus Influenza), 3 Hep B (Hepatitis B), before the 19 month birthday. The goal set by the NYSDOH was to impact 20% of Suffolk County. This goal was achieved with the efforts of the Child Health immunization Nurses by 2012 with 30 assessments complete in private provider practices.

Over the past four years, NYS has provided up to 1,000 doses of free vaccine to the SCDHS Bureau of Public Health Emergency Preparedness to conduct clinic drills for Public Health Preparedness readiness. New York State also provides free Measles, Mumps, and Rubella (MMR) vaccine through the state's Vaccine for Children Program for the SCDHS Bureau of Epidemiology and Disease Control to conduct MMR immunization clinics to college students free of charge. Over one dozen MMR clinics are held annually both at college sites and at the Bureau of Epidemiology and Disease Control Administrative Office. Epidemiology staff works with Student Health Service's staff at the colleges to provide this service.

Vaccine-preventable disease levels are at or near record lows. There were no cases of Rubella or Tetanus in Suffolk County between 2007 and 2012, and there have been no cases of Diphtheria or Polio in over 10 years.[61] Even though most infants and toddlers have received all recommended vaccines by age 2, many under-immunized children remain, leaving the potential for outbreaks of disease. Many adolescents and adults are under-immunized as well, missing opportunities to protect themselves against diseases such as Hepatitis B, influenza, and pneumococcal disease.

There is an increasing trend among parents to delay or refuse routine recommended vaccinations for their children. This trend may be attributed to beliefs that the vaccines or the number and

timing of vaccines contribute to the development of Autism Spectrum Disorders even though the empirical scientific evidence for this is non-existent. Persons may legally decline required vaccinations for religious reasons. These phenomena have the potential to cause more frequent outbreaks of vaccine preventable diseases

A recent article published in the journal of pediatrics looked at the rising case of whooping cough throughout New York State and found a significant correlation with the number of cases of whooping cough and the number of religious exemptions from mandated child vaccinations. The study found that for each 0.1% increase in vaccination exemption rates there was an average 5 per 100,000 more cases of pertussis. The rate of religious exemptions for vaccinations in Suffolk County increased from 0.26%-0.50% in 2000 to 0.51-0.70% in 2011. The study further hypothesizes that not all religious exemptions are truly for religious reasons and may be obtained by parents who simply do not want to vaccinate their children for personal beliefs.[62]

Information on the occurrences of vaccine preventable disease for which data is available is shown in the table below.

Table 41. Vaccine Preventable Diseases-Suffolk County

	2010		2011		2012	
Disease	**Incidence**	**Rate***	**Incidence**	**Rate***	**Incidence**	**Rate***
Hepatitis A	11	0.73	5	0.34	8	0.54
Hepatitis B, acute	8	0.54	11	0.74	10	0.67
Haemophilus Influenza Type B	0	0	0	0	0	0
Influenza, Lab Confirmed	519	34.83	1993	133.76	1661	111.48
Meningococcal Disease	1	0.07	2	0.13	6	0.40
Measles	0	0	0	0	0	0
Mumps	0	0	1	0.07	0	0
Pertussis	53	3.57	298	20.00	508	34.09
Pneumococcal Disease	152	10.20	157	10.54	116	7.79
Tetanus	0	0	0	0	0	0

Source: NYSDOH Health Commerce System. *per 100,000

Hepatitis A Virus

Hepatitis A is a liver disease caused by the hepatitis A virus (HAV). Many cases of hepatitis A are mild or unapparent, especially in children, so the true incidence of hepatitis A is unknown. In August of 2013 in response to a potential hepatitis A outbreak resulting from exposure to a worker at a Southampton restaurant, the SCHDS gave over 400 Hepatitis A vaccines.

Hepatitis B Virus

Hepatitis B is a serious liver infection caused by hepatitis B virus (HBV). HBV infection can cause acute illness and lead to chronic or lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. Hepatitis B vaccination is the most effective measure to prevent HBV infection and its consequences and is recommended for all infants and others at risk for HBV infection. Hepatitis B is associated with sexual transmission, IV drug use and employment in a health related occupations involving contact with blood. Suffolk County's incident rate has seen a drop from the 2006-2008 rates of 0.8 to 0.65 acute cases per 100,000 in 2010-2012. However, because many HBV infections are either asymptomatic or never reported, the actual number of new infections is estimated to be approximately tenfold higher. The decline of new infections has been greatest among children born since 1991, when routine vaccination of children was first recommended. Chronic infection, rendering an individual a continuous carrier of the disease, occurs in about 10% of all Hepatitis B infections.

During 2012, SCDHS Perinatal Hepatitis B Virus Prevention Program provided case management and follow-up to over 73 HBsAg positive women and their infants. All infants received 3 doses of the Hepatitis B vaccine. One infant of a hepatitis B positive mother developed chronic hepatitis B.

Influenza

Seasonal influenza, commonly called "the flu," is caused by influenza viruses, which infect the respiratory tract (i.e., the nose, throat, lungs). Unlike many other viral respiratory infections, such as the common cold, the flu can cause severe illness and life-threatening complications in many people. In the United States, on average 5% to 20% of the population gets the flu and more than 200,000 people are hospitalized from seasonal flu-related complications.

Some people, such as older people, young children, pregnant women, and people with certain health conditions, are at high risk for serious flu complications. The number of laboratory diagnosed influenza case in Suffolk County during 2012 was 1661. A sharp increase in the rate of flu illness was noted during the last month of 2012 and into the first 2 months of 2013. The actual number of cases is unknown, as many ill persons are not tested for the virus. As a "Superstorm Sandy" Public Health Response activity, SCDHS provided over 750 seasonal flu vaccinations to victims and responders of "Superstorm Sandy".

Between 2008 and 2009, 72.3% of Suffolk county adults received a flu shot. This surpasses the New York state 2017 objective of 66.2% but is behind New York State as a whole with 75% of adults receiving the flu vaccine. In 2013, New York State Department of Health recently implemented a law requiring all healthcare workers at various healthcare institutions to either receive the influenza vaccine or wear a mask when in contact with patients. This law seeks to mitigate the risk of healthcare worker associated transmission of influenza.

Measles

Measles is a highly infectious viral disease that can result in severe complications. Approximately 20% of reported measles cases experience one or more complications, including diarrhea, ear infections, pneumonia, encephalitis, seizures, and death. These complications are more common among children under 5 years of age and adults over 20 years old. Measles illness kills 1 million children worldwide each year. The disease is no longer common in the United States, but it remains widespread in most countries of the world. Recent outbreaks in the United States highlight the ongoing risk of measles importations from other countries by people who travel. These outbreaks also highlight the impact vaccination has in preventing measles. To prevent measles, children (and some adults) should be vaccinated with the measles, mumps, and rubella (MMR) vaccine. No cases of measles illness were diagnosed in Suffolk County 2010-2012. During 2012, Public Health clinical staff provided 467 MMR vaccinations to college students, utilizing NYSDOH VFC vaccine at 17 clinics.

Meningococcal Disease

Neisseria meningitidis is a bacterium that can cause serious illness, most commonly meningococcal meningitis or meningococcemia. The bacteria can be spread to other people who have had close or prolonged contact with a patient with meningococcal infection. People in the same household or day-care center, or anyone with direct contact with a patient's oral secretions (such as a boyfriend or girlfriend) would be considered at increased risk of acquiring the infection. The risk of dying from meningitis in the U.S. is below 15%, although the risk is higher among the elderly. Although large epidemics of meningococcal meningitis do not occur in the United States, some countries experience large, periodic epidemics. The vaccine is routinely recommended for young children and college age students who have higher rates of the disease.

Pertussis

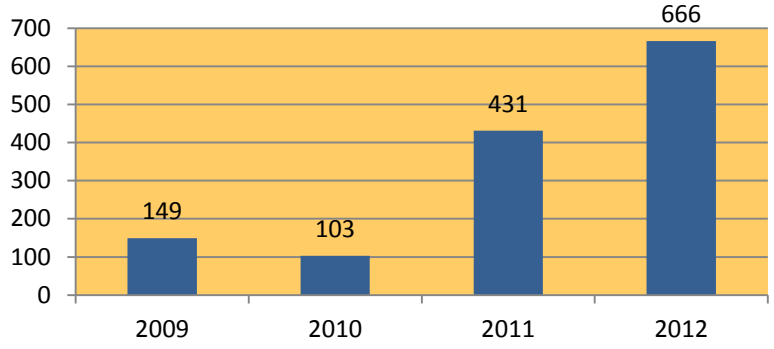
Pertussis is a severe respiratory disease caused by the bacterium *Bordetella Pertussis*. Pertussis vaccine (contained in Tdap, DTP, and DTaP) can prevent this disease. The Advisory Committee on Immunization Practices (ACIP) recommends 5 doses of vaccine for infants and children. In addition, all 11-year old children as they are entering 6th grade should receive a dose of the Tdap vaccine, licensed for use in 2005. Expectant mothers should get one dose of Tdap during each pregnancy, preferably at 27 through 36 weeks. By getting Tdap during pregnancy, maternal

pertussis antibodies transfer to the newborn and likely provide protection against pertussis in early life, before the baby begins DTaP vaccination. Caregivers of young infants should receive Tdap. Adults 19 years of age and older who didn't get Tdap as a preteen or teen should get one dose of Tdap.

Reported cases of pertussis vary from year to year and tend to peak every 3-5 years. More than 41,000 cases of pertussis were provisionally reported across the United States during 2012, including 18 deaths. The majority of deaths continue to occur among infants younger than 3 months of age.

Suffolk County experienced a large, ongoing outbreak of Pertussis beginning in June, 2012, through December, 2012. Over 800 cases of Pertussis were identified and investigated by Public Health staff during that period of time. In addition, Suffolk County experienced one Pertussis related death in a young infant. Many cases occurred in the pre-adolescent and adolescent populations, as immunity can wane after several years have elapsed since prior vaccination. Prophylaxis for close contacts is recommended in most cases. Education and guidance regarding diagnosis, transmission, treatment and management of the illness was provided to many patients, their families, doctors, hospitals, laboratories, health centers, schools, camps and the public, and is routinely provided by our Epidemiology staff.

Figure 27. Comparison of Annual Number of Pertussis Investigations 2009-2012



Pneumococcal Disease

Pneumococcal disease is caused by various strains of the bacterium *Streptococcus pneumoniae*. Manifestations of infection include pneumonia, ear infections, bacteremia, and meningitis. Each year in the United States, there are an estimated 175,000 hospitalized cases of pneumococcal pneumonia. There are more than 50,000 cases of Pneumococcal bacteremia and 3,000 to 6,000

cases of meningitis annually. According to the Centers for Disease Control and Prevention (CDC), invasive pneumococcal disease causes more than 6,000 deaths annually and is one of the most common causes of death in the United States from a vaccine-preventable disease. More than half of these cases involve adults for whom vaccination against pneumococcal.[63] disease is recommended. The rates of diagnosed pneumococcal disease for Suffolk County ranged from 10.2 in 2010 to 7.9 cases per 100.000 populations in 2012.

Human Papilloma Virus

HPV is the most common sexually transmitted virus in the United States. HPV is linked to/ associated with cervical cancer, vulvar vaginal and penile and anal cancers. HPV vaccines offer valuable protection against the health problems HPV can cause.[64] In 2011, 4,364 Suffolk county adolescent females between the ages of 13-17 or 16.1% of the targeted population received their 3 dose HPV vaccine. Well behind New York state rate of 26% and the New York state 2017 objective of 50%.[10] The HPV vaccine is available at SCHDS Health Centers and is covered under the New York Vaccine for Children (VFC) program for adolescent females and males.

Arthropod/Tick-Borne Diseases

In Suffolk County there is a history of repeated public health threat declarations by the State of New York for vector-borne disease. Surveillance activity for eastern equine encephalitis virus (EEEV) and West Nile virus (WNV) is conducted on a countywide basis. EEEV surveillance involves the collection and analysis of only mosquitoes for the presence of eastern equine encephalitis virus. The presence of either virus assists Suffolk County with larvaciding and adulticiding decisions to reduce the risk of these viruses to the human population.

In 2008, mosquito surveillance found the presence of established populations of the Asian tiger mosquito (*Aedes albopictus*), which is a daytime human biting mosquito and a competent vector of human pathogens such as WNV. Birds are the reservoir for WNV and mosquitoes become infected with WNV by feeding on infected birds. Fortunately due to the Asian tiger mosquito's propensity to feed on mammals and not birds, WNV infection is extremely low in the vast majority of mosquito samples tested. To date, there has been only one WNV-positive Asian tiger mosquito sample.

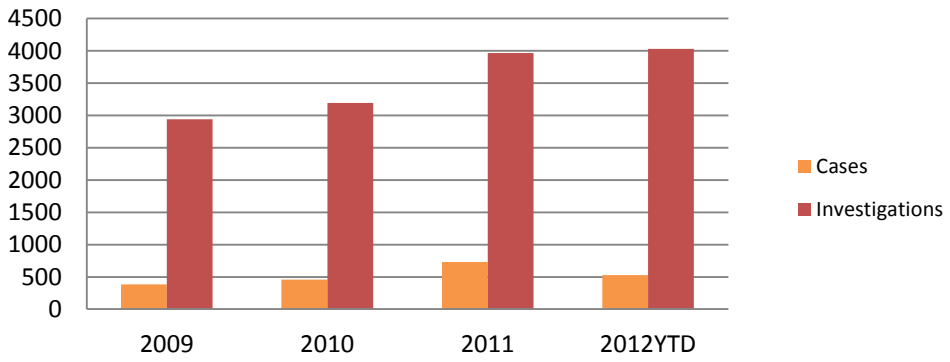
Table 42. Occurrence of Arthropod –Borne Disease in Suffolk County 2010-2012

YEAR	2010		2011		2012	
Disease	**Incidence**	**Rate***	**Incidence**	**Rate***	**Incidence**	**Rate***
Babesiosis	124	8.32	206	13.83	139	9.33
Ehrlichiosis /Anaplasmosis	32	2.15	49	3.29	56	3.76
Dengue	4	0.27	3	0.20	2	0.13
Lyme	297** Extrapolated 606	13.4** 40.67	334** Extrapolated 656	22.42** 44.03	241** Extrapolated Not yet reported	16.17**
Malaria	7	0.47	11	0.74	4	0.27
Rocky Mountain Spotted Fever	3	0.20	2	0.13	14	0.94
West Nile Fever, Encephalitis	25	1.68	4	0.27	14	0.94

***per 100,000 population.**
**** reflects 20% of all lab reports investigated, selected randomly, per NYSDOH.**

The table above notes the incidence and rates per 100,000 population of various important reportable arthropod-borne diseases reported in 2010-2012 for Suffolk County residents. Arthropod-borne diseases, caused by various organisms including viruses (arboviruses), bacteria, and protozoans, are transmitted to humans primarily through the bites of infected mosquitoes and ticks.

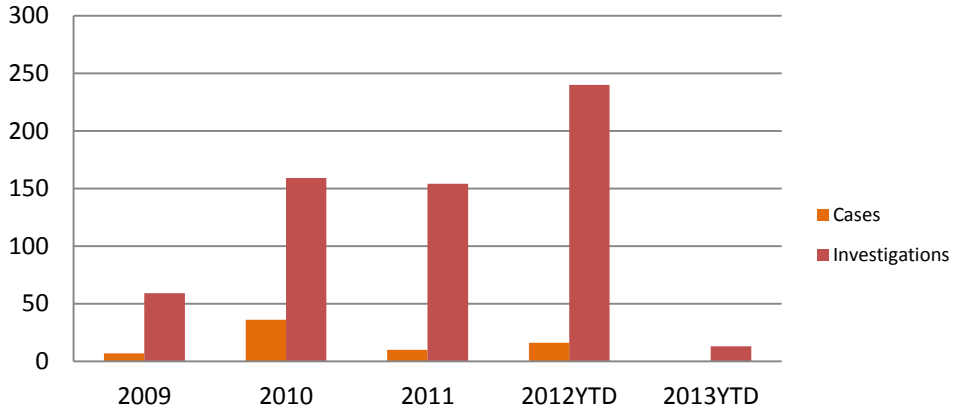
Figure 28. Human Reportable Tickborne Disease Burden
2009- 2012YTD



Arboviral diseases include West Nile virus, Eastern and Western Equine encephalitis, dengue, St. Louis encephalitis, La Crosse encephalitis, Japanese encephalitis, Powassan, yellow fever, and other less common infections. Other vector borne diseases include parasitic diseases such as Babesiosis and Malaria, the rickettsiosis disease Rocky Mountain Spotted Fever (RMSF), and the bacterial illness, Ehrlichiosis, and the related bacterial disease, Anaplasomosis.

Ticks are endemic arthropods to Suffolk County and all persons are at risk for tick bites, although the disease severity is often greater in the elderly and immunocompromised. Currently Babesiosis, Ehrlichiosis, Anaplasomosis, Lyme disease and RMSF are reportable tick diseases endemic to Suffolk County. The most prevalent is Lyme disease, which became officially reportable in 1986. If recognized and treated early, the serious secondary complications of Lyme disease such as arthritis and neurological problems may be avoided. During 2013, two additional arboviral-borne illnesses were in the news, including the Lyme like illness caused by the organism *Borrelia miyamotoi*, and Powassan virus, a tick-borne illness which has been identified in 15 NYS cases over the past 10 years. The tick-borne illnesses account for over half of the laboratory reports received and are concentrated in the spring and summer months.

Figure 29. Human Reportable Mosquito Borne Disease Burden
2009-2013YTD



West Nile Neuroinvasive and West Nile Fever

West Nile Neuroinvasive and West Nile Fever are arboviral diseases transmitted to humans through the bite of an infected mosquito. Person-to-person transmission occurs rarely through blood transfusion and organ transplantation. The majority of human arboviral infections are asymptomatic. Symptomatic infections most often manifest as a systemic febrile illness and less commonly as neuroinvasive disease. West Nile virus (WNV) is the leading cause of domestically acquired arboviral disease in the United States. Maintaining surveillance remains important to identify outbreaks and guide prevention efforts, including mosquito larvaciding and adulticiding activities during mosquito season. The potential threat of mosquito-borne disease in Suffolk County is real and on-going especially during the spring, summer, and fall months. SCDHS records show that numerous "public health threats" were declared in the county over the past 16 years. Public health threats were declared because of detection of mosquito-borne human diseases or pathogens, including Eastern Equine Encephalitis virus (EEE), Malaria, and West Nile disease. During these years, confirmed human diseases and deaths from locally acquired mosquito-borne disease were documented in Suffolk County. WNV has been diagnosed in a total of 73 cases through 2012 since the first case was diagnosed in 2001. To date, there have been 7 Suffolk County resident deaths associated with WNV. WNV is primarily diagnosed in the elderly and adults greater than 50 years of age.

Malaria

Malaria is a serious and sometimes fatal disease caused by a parasite that infects a particular mosquito. The disease is then transmitted to humans, who become typically very sick with high fevers, shaking chills, and flu-like illness. About 1,500 cases of malaria are diagnosed in the United States each year. The vast majority of cases in the United States are in travelers and immigrants

returning from countries where malaria transmission occurs, many from sub-Saharan Africa and South Asia. Left untreated, persons may develop severe complications and die. Two locally acquired Malaria cases were diagnosed in 1999 in two young children. All cases of Malaria diagnosed in Suffolk County since 1951, except for the 2 endemic cases diagnosed in 1999, have been imported.

Dengue

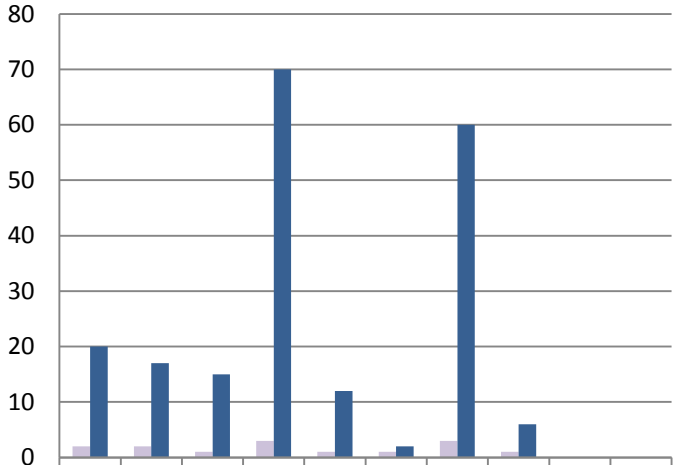
Dengue fever is the most common cause of fever in travelers returning from the Caribbean, Central America, and South Central Asia. It is typical for one or several Suffolk residents with recent travel to acquire Dengue fever each year.

Food/ Water Borne Disease

The Center for Disease Control and Prevention estimates that each year roughly 1 in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne illness. Consumption of food prepared away from home plays an increasingly large role in the American diet. In 1970, 26 percent of all food spending was on food away from home; by 2010, that share rose to 41 percent. A number of factors most likely contributed to the trend of increased consumption of food from food service establishments , including an increase in the number of women employed outside the home, more two-income households, more affordable and convenient fast food restaurants, and decreased family sizes that make dining out more affordable.

There are over 6,200 food service establishments, including temporary food vendors, permitted annually by the SCDHS Bureau of Public Health Protection's (BPHP). The food safety inspection officer investigates all complaints involving illnesses. Although 161 complaints of illness were received in 2012, 135 were single-case complaints. In total, only 239 persons were affected. Twenty-six (26) multiple-case complaints involving a total of 104 cases occurred in 2012.

Figure 30. Foodborne Illness Outbreaks and Cases

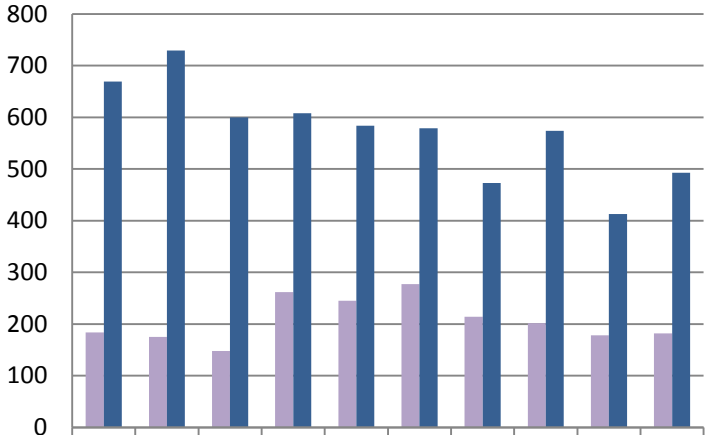


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of Outbreaks	2	2	1	3	1	1	3	1	0	0
Number of Cases	20	17	15	70	12	2	60	6	0	0

In 2012 there were 6,466 permitted facilities, including permanent facilities, mobile vendors, and temporary vendors. This number includes 3,323 high-risk establishments, which require two inspectional cycles per year as per the County's contract with the New York State Department of Health via the Municipal Health Services Plan.

Food Control performed 10,327 inspections in 2012 during which 89.6% of all permanent food service establishments under permit were inspected for at least one inspectional cycle (each cycle can involve multiple inspections). Consumer complaints generated 675 investigations, of which 161 were associated with foodborne illness.

Figure 31. Illness vs. Non-Illness Complaints



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Illness Complaints	184	175	148	262	245	277	214	202	178	182
Non-Illness Complaints	669	729	600	608	584	579	473	574	413	493

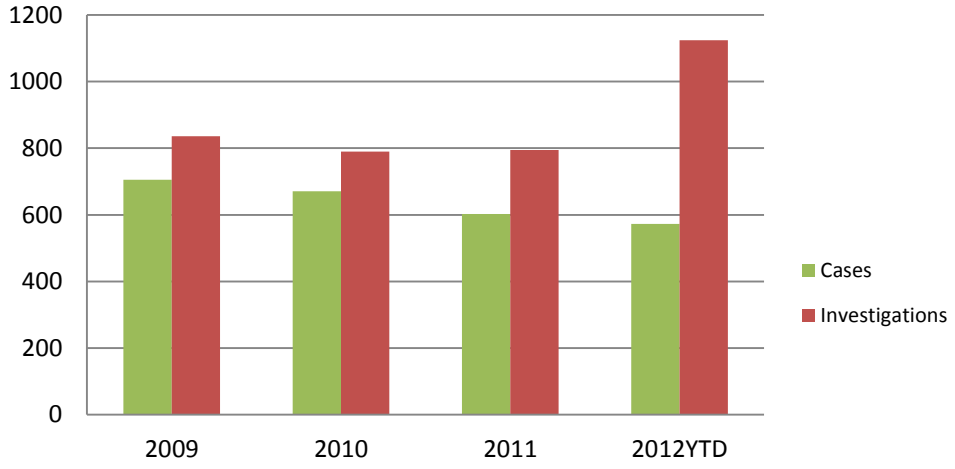
The Plan Review office, conducting 933 reviews of food establishment plans in 2012.

Table 43. Occurrence of Food / Water Borne Diseases- Suffolk County

	2010		2011		2012	
Disease	**Incidence**	**Rate***	**Incidence**	**Rate***	**Incidence**	**Rate***
Amebiasis	34	0.20	15	0.10	25	1.68
Botulism	0	0	0	0	0	0
Campylobacteriosis	177	11.88	217	14.56	240	16.10
Cryptosporidiosis	10	0.67	10	0.67	14	0.94
Cyclosporiasis	2	0.13	2	0.13	0	0
EHEC, Shigatoxin Producing Infection	12	0.81	7	0.47	9	0.60
E.coli. 0157:H7	8	0.54	3	0.20	6	0.40
Giardiasis	137	9.19	99	6.64	84	5.64
Hemolytic Uremic Syndrome	1	0.07	0	0	0	0
Listeriosis	8	0.54	6	0.40	6	0.40
Salmonellosis	205	13.76	179	12.0	217	14.56
Shigellosis	55	3.69	30	2.01	43	2.89
Typhoid Fever	2	0.13	4	0.27	6	0.40
Vibrio Non-01 Cholera	9	0.60	16	1.07	17	1.14
Yersiniosis	4	0.27	5	0.34	11	0.74

* per 100,000

Figure 32. Human Reportable Foodborne/Enteric Disease Burden 2009- 2012YTD



Campylobacteriosis

The CDC notes that active surveillance through FoodNet indicates that about 13 cases are diagnosed each year for each 100,000 persons in the population. Many more cases go undiagnosed or unreported, and Campylobacteriosis is estimated to affect over 2.4 million persons every year, or 0.8% of the population. The Suffolk County rate is about 12 to 16 persons per 100,000 populations in 2010 through 2012.

Cryptosporidiosis

In the United States, an estimated 300,000 cases of cryptosporidiosis occur each year. Suffolk County cases have frequently been related to waterborne exposure from water parks or lakes.

EHEC, Shigatoxin Producing Infection, E Coli 0157:H7, and Hemolytic Uremic Syndrome (HUS)

Escherichia coli O157:H7 bacteria is a leading foodborne enteric pathogen associated with human illness, including hemorrhagic colitis and hemolytic uremic syndrome (HUS), the leading cause of acute renal failure in children. Similarly, non-O157 enterohemorrhagic *E. coli* (EHEC) serotypes have been implicated in outbreaks of disease worldwide and are currently considered emerging pathogens by the World Health Organization (WHO). Most EHEC infections in humans are foodborne, and the source of infection is an animal reservoir. Cattle and other ruminants are considered major reservoirs hosts of EHEC. Recent reports have also emphasized that farm animals and their environment pose a zoonotic risk for humans, based on outbreaks of *E. coli* O157:H7 infection among farm visitors. Contaminated fresh vegetables and fruits can also pose a risk for humans. HUS can be precipitated by E Coli and Shigatoxin infection and cause death in 5% of those affected. Suffolk County reported between 10 and 21 combined cases per year of these

three diagnosed illnesses between 2010 and 2012.

Giardiasis

Giardia intestinalis is a protozoan flagellate found on surfaces or in soil, food, or water that has been contaminated with the feces from infected humans or animals. People can become infected after accidentally swallowing the parasite. Giardia causes diarrheal illness, and giardiasis is a common cause of waterborne disease in humans in the United States. Risk factors for Giardiasis are the same as those for cryptosporidiosis. Suffolk County has reported 84 to 99 per year over the past 3 years.

Listeriosis

Listeriosis, a serious infection caused by eating food contaminated with the bacterium Listeria monocytogenes, has recently been recognized as an important public health problem in the United States. The disease affects primarily persons of advanced age, pregnant women, newborns, and adults with weakened immune systems. However, persons without these risk factors can also rarely be affected. Per the CDC, the national annual incidence of listeriosis decreased by 34% between 1989 and 1993; an analysis of the incidence trend from 1996 to 2006 revealed a 36% decline. However, outbreaks continue to occur. In 2002, an outbreak that resulted in 54 illnesses, 8 deaths, and 3 fetal deaths in 9 states was traced to consumption of contaminated turkey meat. Annual Suffolk cases have been between 6 to 8 cases per year from 2010-2012.

Salmonellosis

Salmonellosis is an infection with the bacteria Salmonella**.** Salmonella are usually transmitted to humans by eating foods contaminated with animal feces. Food may also become contaminated by the hands of an infected food handler who did not wash hands after using the bathroom. Salmonella may also be found in the feces of some pets, and people can become infected if they do not wash their hands after contact with pets or pet feces. Every year, approximately 40,000 cases of salmonellosis are reported in the United States. Because many milder cases are not diagnosed or reported, the actual number of infections may be thirty or more times greater. Children are the most likely to be ill with salmonellosis. The rate of diagnosed infections in children less than five years old is about five times higher than the rate in all other persons. Young children, the elderly, and the immunocompromised are the most likely suffer severe infections. It is estimated that approximately 400 persons die each year with acute salmonellosis. Suffolk County cases have ranged from 179 to 217 cases per year over the past 3 years.

Shigellosis

Shigellosis is an infectious disease caused by a group of bacteria called Shigella**.** Shigella bacteria pass from one infected person to the next. Most Shigella infections are the result of the bacterium passing from stools or soiled fingers of one person to the mouth of another person. This happens

when basic hygiene and hand washing habits are inadequate and can happen during certain types of sexual activity. It is particularly likely to occur among toddlers who are not fully toilet-trained. Family members and playmates of such children are at high risk of becoming infected. Shigella infections may also be acquired from eating contaminated food. Food may become contaminated by infected food handlers who do not wash their hands adequately after toileting. Vegetables can become contaminated if they are harvested from a field with sewage in it. Flies can breed in infected feces and then contaminate food. Water may become contaminated with Shigella bacteria from sewage, or if someone with shigellosis swims in or plays in water (especially in splash tables, untreated wading pools, or shallow play fountains used by daycare centers).

Every year, about 14,000 cases of shigellosis are reported in the United States. Because many milder cases are not diagnosed or reported, the actual number of infections may be twenty times greater. Shigellosis is particularly common and causes recurrent problems in settings where hygiene is poor and can sometimes sweep through entire communities. Many cases are related to the spread of illness in child-care settings, and many are the result of the spread of the illness in families with small children. Suffolk County cases from 2010-2012 range from 30 to 55 cases per year.

Vibrio Non-01 Cholera

The bacteria Vibrio Cholera serogroup pathogenic organisms other than 01 and 0139 (Cholera) have been associated with sporadic cases of enteric disease, but have not spread in epidemic form. The bacteria are found in aquatic environments worldwide. Cases are linked to consumption of raw or undercooked seafood or ingestion of surface waters. All humans are subject to gastroenteritis if sufficient organisms are ingested. The most common cause of vibriosis diagnosed in Suffolk residents from 2010-2012 (9 to 17 cases per year) was from ingestion of raw shellfish. The organism traced to several persons diagnosed in 2012 was connected to an outbreak from contaminated oyster beds.

Yersiniosis

Yersiniosis is an infectious disease caused by a bacterium of the genus *Yersinia*. In the United States, most human illness is caused by one species, *Y.* enterocolitica. *Y.* enterocolitica is a relatively infrequent cause of diarrhea and abdominal pain. Based on data from the Foodborne Diseases Active Surveillance Network (FoodNet), which measures the burden and sources of specific diseases over time, approximately one culture-confirmed *Y.* enterocolitica infection per 100,000 persons occurs each year. Children are infected more often than adults. Infection is most often acquired by eating contaminated food, especially raw or undercooked pork products. The preparation of raw pork intestines (chitterlings) may be particularly risky. Infants can be infected if their caretakers handle raw chitterlings and then do not adequately clean their hands before handling the infant or the infant's toys, bottles, or pacifiers. Drinking contaminated unpasteurized

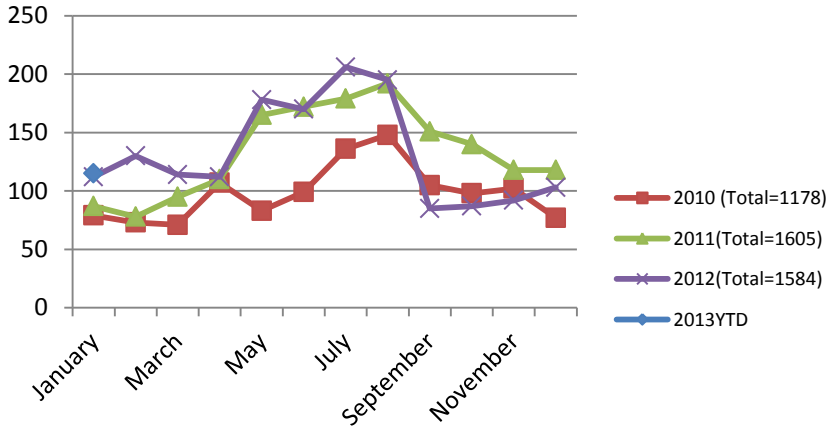
milk or untreated water can also transmit the infection. Occasionally *Y.* enterocolitica infection occurs after contact with infected animals. Suffolk County reported 4 to 11cases per year between 2010 and 2012.

Rabies

Rabies is a viral disease of mammals most often transmitted through the bite of a rabid animal. Rabies disease is invariably fatal, and infects the central nervous system, causing encephalopathy and death, for animals and people once contracted. Most recent human rabies cases in the United States have been caused by rabies virus from bats. In Suffolk County, 3-5% of the bat population tested annually carries rabies. There have been no cases of human rabies in Suffolk County, and no cases of terrestrial rabies in Suffolk County in the past 3 years.

Epidemiology staff authorized 134 persons in 2012 for rabies post exposure treatment (RPEP) following NYSDOH rabies treatment guidelines. Eleven persons received treatment by division clinical staff. In addition, over 1600 animal bites were investigated by staff for potential for rabies virus exposure. Hundreds of persons as well as dozens of medical providers were educated regarding New York State guidelines regarding those who are recommended for rabies post exposure treatment as well as the risks of rabies and treatment protocols.

Figure 33. Reported Human Potential Rabies Exposures Needing Folow Up 2010-2013



The entire population of Suffolk County is currently at risk for rabies. The first case of a rabid raccoon in more than 25 years was identified in the County in 2006. Since that time, 18 additional cases of rabid raccoons have been confirmed in western Suffolk County, with the concentration of rabid raccoons in Northwest Huntington.

Suffolk County confirmed 5 positive raccoons in 2006, 12 in 2007, 1 in 2008 and 1 in 2009. The total number of Suffolk County's positive raccoons is 19, all of which have been from the same general area within Huntington Township. Besides dogs and cats, bats are a serious source of potential rabies transmission to humans, domestic pets and wild mammals and are found in all parts of Suffolk County. On average, 3 to 6% of tested bats in Suffolk County carry the rabies virus. Between 2002 and 2012 inclusive, thirty bats tested positive for rabies. Persons exposed to rabid bats or to bats that were unable to be tested required post-exposure prophylaxis.

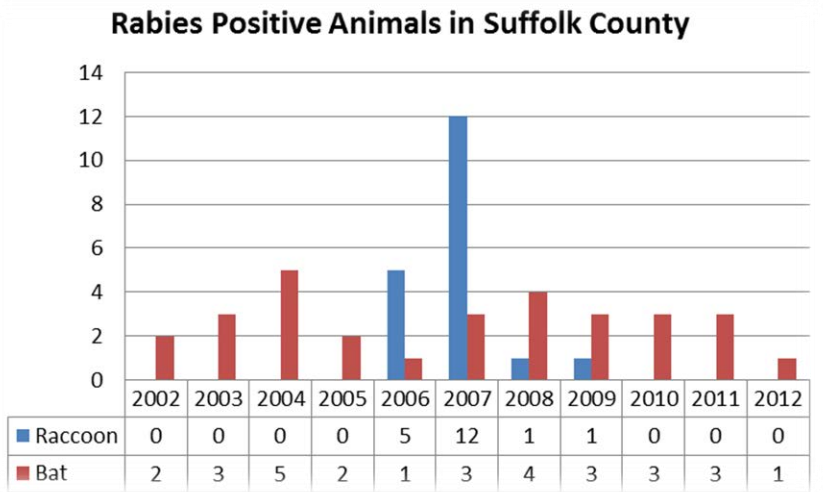


Figure 34.

While accurate statistics are not available regarding compliance, domestic dogs and cats are required by State and County Law to be vaccinated against rabies.

Each year over 1,500 Suffolk County residents are bitten by a domestic animal. Each domestic animal bite incident is investigated by the Bureau of Public Health Protection (BPHP) staff.

Rabies is communicable for a period of three to five days prior to the onset of clinical signs and is transmittable throughout the remaining life of the animal. All animals infected with rabies will eventually die of the disease. If a domestic animal remains healthy during a 10-day confinement period, then rabies is not a concern in that exposure.

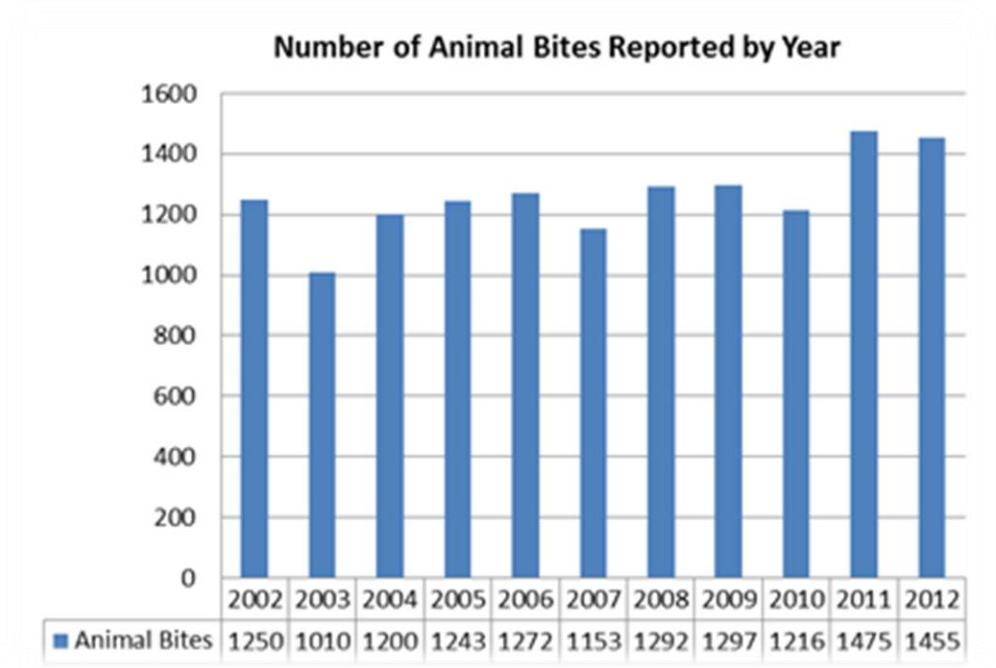


Figure 34.

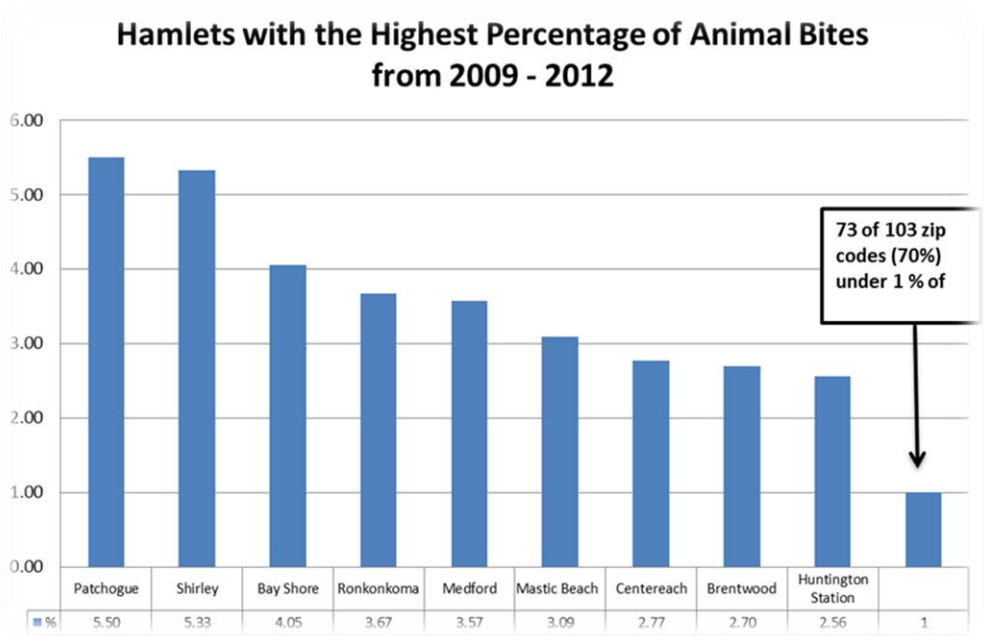


Figure 36.

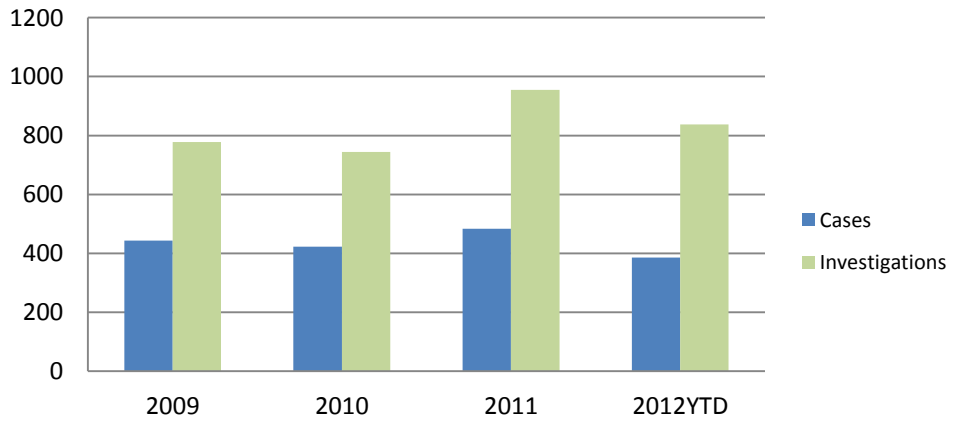
Viral, Bacterial, and Parasitic Diseases Not Previously Listed – Suffolk County

Table 44. Occurrence of Viral, Bacterial & Parasitic Disease

	2010		2011	2012		
Disease	**Incidence**	**Rate***	**Incidence**	**Rate***	**Incidence**	**Rate***
Encephalitis	16	1.07	10	0.67	7	0.47
Hepatitis C, Acute	1	0.07	1	0.07	2	0.13
Herpes, Infant <=60 Days	0	0	0	0	3	0.02
Legionellosis	28	1.88	35	2.35	33	2.21
Meningitis, Other Bacterial	7	0.47	6	0.40	2	0.41
Meningitis, Aseptic	78	5.23	127	8.52	115	7.72
Psittacosis	0	0	0	0	0	0
Streptococcal, Groups A and B	136	9.13	165	11.07	169	11.34
Toxic Shock Syndrome	0	0	0	0	0	0

* per 100,000

Figure 37. Human Reportable Bacterial/Viral Invasive Disease Burden
2009-2012YTD



Hepatitis C

Hepatitis C virus (HCV) infection is the most common chronic blood borne infection in the United States; approximately 3.2 million persons are chronically infected. Although only 849 cases of confirmed acute Hepatitis C were reported in the United States in 2007, CDC estimates that approximately 17,000 new HCV infections occurred that year, after adjusting for asymptomatic infection and underreporting. Persons newly infected with HCV are usually asymptomatic, so acute Hepatitis C is rarely identified or reported. It is estimated that 75% of persons who are infected with Hepatitis C are undiagnosed. In Suffolk County, 1-2 persons per year were diagnosed with acute illness during the past three years. In 2012, 792 cases of chronic Hepatitis C were diagnosed.

Legionellosis

Legionnaires' disease is caused by the bacterium Legionella**.** Each year, between 8,000 and 18,000 people are hospitalized with Legionnaires' disease in the U.S. However, many infections may be mild or not diagnosed or reported, so this number may be higher. Legionnaires' disease can be very serious and can cause death in up to 5% to 30% of cases. People most at risk of getting sick from the bacteria are the elderly, people who are smokers, those who have chronic lung disease, or who are immunocompromised. Legionnaires' disease can be very serious and can cause death in up to 5% to 30% of cases. Suffolk County confirmed between 28 -35 cases per year from 2010-2012.

Aseptic Meningitis

Viral meningitis, a category of aseptic meningitis, is a serious but rarely fatal in persons with normal immune systems. Enteroviruses are one of the most common causes of viral meningitis, and are most often spread through direct contact with respiratory secretions (e.g., saliva, sputum, or nasal mucus) of an infected person. The virus can also be found in the stool of persons who are infected. The virus is spread through this route mainly among small children who are not yet toilet trained. It can also be spread this way to adults changing the diapers of an infected infant. Aseptic Meningitis was diagnosed in between 78 to 127 cases per year in 2010-2012.

Anthrax and other Category A Bioterrorist Agents

Certain diseases are considered potential bioterrorist agents because they can be easily disseminated or transmitted from person to person; they can result in high mortality rates and have the potential for major public health impact; they have the potential to cause public panic and social disruption; and they require special action for public health preparedness. These include Anthrax (Bacillus anthracis), Botulism (Clostridium botulinum toxin), Plague (Yersinia pestis), Smallpox (variola major), Tularemia (Francisella tularensis), *and the* viral hemorrhagic fevers (filoviruses [e.g., Ebola, Marburg] and arenaviruses [e.g., Lassa, Machupo]). Although several of the diseases can occur naturally in rare instances, such as anthrax, botulism, or

Tularemia, Epidemiology staff is on high alert for the report of these. Suffolk diagnosed 1 case of infant botulism in 2006. There were no cases of the other diseases in 2010-2012 in Suffolk County.

Table 45. Diseases Infrequently Diagnosed including Bioterrorist and Emerging Diseases-Suffolk County

	2010		2011		2012	
Disease	**Incidence**	**Rate***	**Incidence**	**Rate***	**Incidence**	**Rate***
Anthrax	0	0	0	0	0	0
Botulism, Infant	0	0	0	0	0	0
Brucellosis	0	0	0	0	0	0
Cholera	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
Glanders	0	0	0	0	0	0
Hantavirus	0	0	0	0	1	0.07
Meliodidosis	0	0	0	0	0	0
Monkey pox	0	0	0	0	0	0
Plague	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0
Q Fever	0	0	0	0	0	0
Rabies	0	0	0	0	0	0
Rubella	0	0	0	0	0	0
SARS	0	0	0	0	0	0
Smallpox	0	0	0	0	0	0
Staph enterotoxin B poisoning	0	0	0	0	0	0
Tularemia	0	0	0	0	0	0
Vancomycin Resistant Staph Aureaus	1	0.07	0	0	1	0.07
Transmissible Spongiform Encephalopathies	0	0	0	0	0	0
Trichinosis	0	0	0	0	0	0
Viral hemorrhagic fever	0	0	0	0	0	0

* per 100,000 New York State Residents

Environment & Hazard Response

Environmental Quality

Water

Water sources can be impacted by nitrates, pesticides, or other contaminants. There are currently 246 regulated public water supply systems in Suffolk County, including 37 community systems and about 198 non-community systems. Collectively, these suppliers provide approximately 1000 public and non-community drinking water supply wells to nearly 1.5 million residents. In addition, there are approximately 45,000 households in Suffolk County that are served with private on-site wells.

Hundreds of thousands of Suffolk County residents and visitors of all age groups, races and ethnicity utilize Suffolk County's beaches each summer. Suffolk's beaches attract vacationers from western Long Island, New York City, from around the country and around the world. There are 137 permitted bathing beaches regulated by the office of Ecology and nearly 54 other local property owner association beaches that are monitored to assure clean waters, swimmer safety, and a healthful place to recreate.

Groundwater and surface water monitoring programs utilize the SCDHS Division of Environmental Quality (SCDHS DEQ) lab to analyze over 300 parameters, and over 50,000 samples per year. This included; ~1,300 at public water supply wells; 700 distribution system samples; 420 private wells samples; and 90 samples collected in response to complaints. The table below lists the frequency of reviews, investigations and other activities performed by the SCDHS DEQ.

Table 46. Annual Water Safety Reviews & Inspections

Engineering plan reviews	87 plans per year
Completed Works Inspections	23 per year
Monitoring Wells Installed	135 per year
Monitoring Well/Stream samples	890 per year
Residential program applications for new construction, water supply, and sewage disposal	3,000 annually
Commercial program applications for new construction, water supply, and sewage disposal	450annually
Subdivision of land applications	200 annually
Construction for new or modified sewage treatment plants.	20annualy
Sewage treatment plant samples and inspections	200 annually

Table 47. Waste Water Management Assistance

	2010	2011	2012	2013 est.	2014 proj.
Telephone Calls	57057	43115	32293	35020	40000
Counter Visits	9050	8701	8229	8705	9000
Engineering Appointments.	852	919	874	975	1000
Sanitarian Appointments.	322	130	192	276	300
FOIL (Freedom of Information Law)	1566	1587	1942	2004	2200

Source OWM monthly reports

Pollution

Hazardous materials are commonly disposed of improperly because of a lack of understanding of the impacts on the environment or because of the high costs of proper hazardous material disposal. The threat to the environment from chemical contamination remains the greatest threat to the County's precious Sole Source Aquifer.

There are more than 19,000 commercial and industrial facilities in Suffolk County that may pose a

threat to the groundwater resources. Approximately 10 percent of facilities are categorized as high-risk facilities, which are primarily gasoline stations and dry cleaners. Sampling monitoring wells installed at several "Mega" Laundromat facilities, located in Suffolk County, have revealed the presence of elevated levels of detergents, DEET, and phalates – a suspected endocrine disrupter. Some of these compounds have also exceeded drinking water standards.

Approximately 20% of facilities are medium risk facilities such as metal plating shops, machine shops, pharmaceutical manufacturing and auto repair shops. The remaining 70% of facilities are classified as lower risk facilities and include facilities with only heating oil tanks, facilities with small indoor tanks and facilities with unknown operations.

As a product of the SCDHS DEQ facility inspections, 576 facilities were targeted for enforcement actions in 2012. Through these inspections and review of environmental site assessments, the department found contaminated soil and/or liquid at 146 facilities. At these 146 sites, the SCDHS DEQ oversaw the removal of more than 700,000 gallons of contaminated liquid and 5,000 tons of contaminated soil from the environment

The SCDHS DEQ office of Pollution Control (OPC) supervises 150 - 200 environmental remediations annually.

There are approximately 200 sewage treatment plants located in Suffolk County. At present, the number of residents served by sewage treatment plants in Suffolk County is approximately ¼ to ⅓ of the total population or 160,000 homes.

Table 48. Annual Water Toxic Hazards Reviews & Inspections

Engineering plans for storage of toxic/hazardous materials.	400 annually
Industrial inspections	1,200 per year
Industrial clean-ups	200 annually
Indoor and outdoor swimming pools inspections and permits	600 annually

Nuisance Control

The SCDHS General Sanitation Unit within the Bureau of Public Health Protection responds to public complaints, which are broadly divided into three major categories:

- Rodent Complaints: Identify where rats are present and educate individuals regarding the control of environmental conditions to mitigate a rodent infestation.

- Heat and Utility Complaints: Heat complaints involve a tenant with a lack of heat, usually during the bitterest days of winter. The Department responds quickly and forcefully to ensure the safety of the residents.

- Nuisance Complaints: Nuisance complaints involve conditions that could lead to a potential threat to the health of the general public. Conditions such as overflowing sewage, accumulation of animal waste, stagnant water and similar problems are investigated and remediated. Many Suffolk County residents do not realize that feeding birds or improperly securing waste on their properties, are contributing to or sustaining public health nuisance conditions, including rodent infestations.

In 2012, General Sanitation complaints were investigated by SCDHS staff in an average of 5 days.

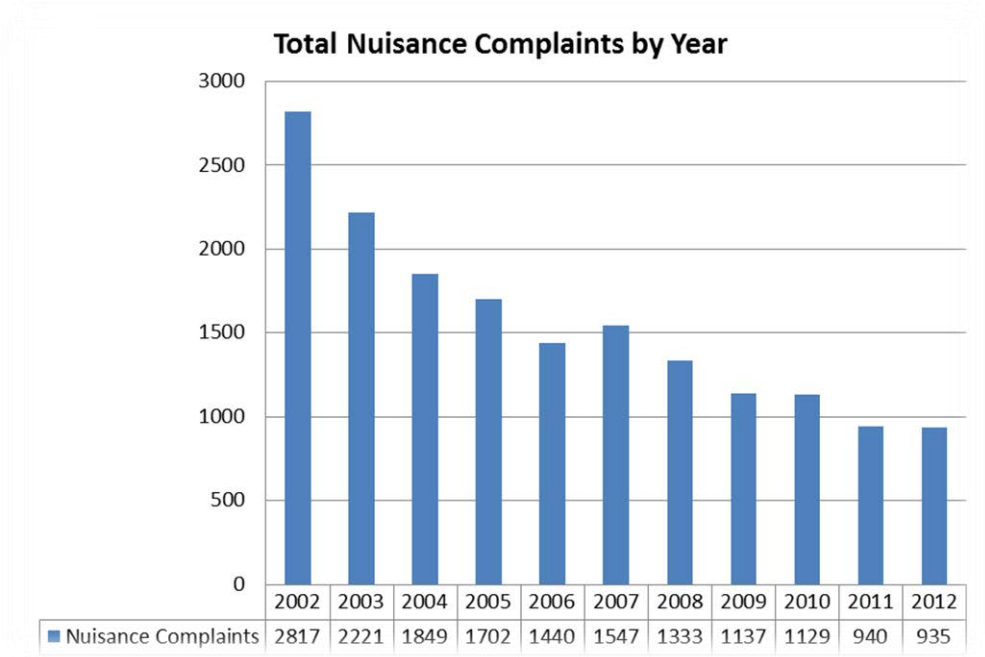


Figure 38.

Radiation Protection

Radiation Protection

Emergency Preparedness across Suffolk County takes into consideration the identification and description of those facilities or activities which, by their nature, may cause a radiological emergency. They include the Nuclear Power Station at Millstone, Connecticut, operated by the Northeast Utilities Service Company. Another is the western two-thirds of Fisher's Island which falls within Millstone's Emergency Planning Zone (EPZ). The EPZ encompasses the radioactive Plume exposure pathway wherein the potential exists for carrying out emergency measures, such as, sheltering or evacuation. Another EPZ, encompassing larger areas of Suffolk County, includes the ingestion exposure pathway - an area in which radiation exposure would typically be from the ingestion of contaminated water, milk and vegetables. A radioactive plume can contain I-131, Cs-137, Kr-88, Xe-133 and several other isotopes of different half-lives, activities and biological hazards. The dispersion of radioactive gases or particles into the atmosphere from an over-the-fence incident could impact large population centers in the county, and would require coordinated intra-county and inter-state response.

Suffolk County is home to the Brookhaven National Laboratory (BNL), a research facility located in Central Suffolk County that is operated through a U.S. Department of Energy (DOE) contract and under Federal jurisdiction to provide the County with onsite radiological assistance. All on-site incidents are the responsibility of BNL. These incidents would involve localized releases of low level radioactive materials on BNL roadways during transport to their Waste Management Facility or an exposure to workers who are dismantling the last of three on-site decommissioned research nuclear reactors. Any event within the perimeter of BNL would impact about 2,000 persons, almost all adults. Any release extending beyond the boundaries of BNL would require a concurrent response by the County

The risk to the public depends on the radiological dose received, which in turn, is dependent of dispersal device, isotope, proximity to the release as well as the individual's underlying health. Radiological dose measurements must be made at various geographical locations beyond the foci of the radiological event to establish 'hot' and 'safe' zones.

Utilization of a Zip-Code map gives a rough indication of population centers and potentially contaminated individuals once the physical boundaries of the contamination have been determined. This information could be used to assess what groups might be at risk or assist planners on where to establish Community Reception centers (CRS) and Points of Dispensing (POD).

Special Populations

Fisher's Island, with a total population of 289 persons, has its own unique zip-code. It is in very close proximity to the Millstone Nuclear Power Plant. For Fire Island, with a total population of 491 persons, the village of Ocean Beach has its own unique zip-code, whereas the village of Saltaire has a zip-code associated with Bay Shore. The two American Indian tribes, the Shinnecocks and the Unkechaug, reside naturally within Southampton and Mastic hamlets, respectively. The combined populations for the two Indian Nations in year 2010 was 953 persons.

Transportation Emergencies

Transport of radiopharmaceuticals occurs frequently on our roadways and railways by the U.S. Post Office or other freight couriers. Certain materials, based on their activity levels and volume, require more protective measures such as shipment by "exclusive use" vehicles along specified routes. There are stringent Department of Transportation regulations concerning the transportation of radioactive materials (RAM). Facilities utilizing RAMs are licensed by New York State Bureau of Environmental Radiation Protection (NYS BERP) and the Department of Labor (DOL). A localized event could impact a small group of a few hundred persons, anywhere in the County.

Radiopharmaceuticals such as, Iodine-131, Technetium-99 and Xenon-133, are routinely used by medical facilities. Radiation therapy sources, Cobalt-60 and Cesium-137, are shipped to hospitals and radiology offices. Many types of radiation sources are used by industrial and educational facilities.

Other Potential Hazards

Accidental exposure may also occur in a variety of settings, including exposure from portable industrial x-ray machines (Gamma Sources such as I-129); Medical x-ray machines (Beta and X-ray sources); Satellite re-entry (Gamma Sources and Pu-239) and radioactive waste.

Terrorism

The potential exists for the deliberate use of radioactive material to cause harm and disruption. The possibility of a Radiological Distribution Device (RDD) or the detonation of an Improvised Nuclear Device (IND) are both plausible scenarios, as either the primary blast area, or as a contaminated plume travels from another area, affecting a wide range of people, from several dozen to several thousand, depending on the product, volume, intensity.

Response Plans

The Suffolk County Department of Health Services maintains a close relationship with multiple emergency response agencies in the county, and has an integral part in the county's Comprehensive All-Hazard Response Plan. The SCDHS maintains a posture for response to the

public health and environmental contamination concerns. In addition, and as annexes to the plan, the SCDHS maintains the Medical Countermeasures Plan and Public Health Emergency Response Plan to address a variety of calamities, including radiologic emergencies.

The Suffolk County Department of Health has an agreement with the Brookhaven National Laboratory (BNL) to provide subject matter expertise through its Radiologic Assistance Program (RAP).

Victims could be injured from the immediate blast and would have to be decontaminated at the scene before being transported to hospitals for blast injury treatments, exacerbated by radioactive contamination, and the complications associated with radiation sickness.

Emergency Response Plans call for the routine decontamination and surveying of first responders and equipment to ensure a safe working environment.

Community Reception Centers (CRC) would be established to address the concerns of the worried well. Radiological surveying occurs at the CRC to ensure that those with unacceptable levels of exposure are re-directed to medical care facilities and to protect the integrity of the CRC. Decontamination showers are made available.

Emergency Medical Services

Annual EMS call volume in the County exceeds 124,000 ambulance requests per year. Each year, there has been an increase in the overall number of calls. Advanced Life Support interventions have steadily increased from 11,000 in 1999 to over 20,200 in 2012. Depending upon the size of the community, the number of EMS alarms per year may vary from as little as fifty to six thousand. A review of out of hospital sudden cardiac arrest in Suffolk County indicates that there are nearly 1000 cardiac arrests per year. There has been continuous attention to improving survival from out of hospital cardiac arrest, with a focus on EMT training and expansion of Public Access Defibrillation (PAD) programs and citizen (compression-only) CPR. Recent review of cardiac arrest survivability done in 2009 demonstrates that the sustained Prehospital Return of Spontaneous Circulation (PROSC) rate 14%, yet the survival to discharge home neurologically intact is 2.5%. In context, 85% of these cases occurred in the home (not likely to have an AED), 63% were not witnessed, and 20% of the arrests presented with a shockable rhythm.

Opioid Overdose

The misuse of opioids has emerged as an epidemic throughout the United States as well as in Suffolk County, with sixty one deaths directly attributable to opioid overdose in 2008. In addition, the antidote naloxone (Narcan™), a staple of Advanced Life Support (ALS) care, was administered by ALS providers for known or suspected opioid overdose in 254 cases in 2008 and 352 cases in 2012, a 72% increase. In effort to address this growing problem, the Division entered into a NY State DOH-approved Pilot Demonstration Project to test a basic life support provider's ability to recognize opioid overdose and safely administer naloxone via inhalation. In addition, recognizing the importance of timely administration of naloxone, the Division solicited the participation of the Suffolk County Police Department in the pilot program. As of mid- 2013 682 EMS providers and 797 police officers, totaling 1479 EMTs have been trained. EMS administered inhalational Narcan 45 times, and the police department administered inhalational Narcan 99 times, totaling 144 reversals.

SECTION TWO-Health Challenges

Suffolk County, located on the eastern portion of Long Island, New York is 86 miles long and at its widest point is 26 miles wide. Because of its proximity to New York City and the presence of high tech industries plus research and higher education institutions, Suffolk County is an affluent area. However, many areas of poverty still exist in Suffolk County. The high costs of housing, utilities, food, and gasoline plus limited access to public transportation create many financial problems for Suffolk County's economically challenged residents.

A. BEHAVIORAL RISK FACTORS

The need for lifestyle changes is an important factor in the successful prevention and self-management of disease. Behavior changes involving physical activity, food practices and smoking cessation are most often difficult to implement and maintain, and are greatly influenced by one's attitudes, expectations about the outcomes, and beliefs involving self-efficacy, locus of control and intentions. In addition, environmental and other societal factors impact the ability to change behaviors. Examples include availability of safe places to walk, access to stores that sell fruits and vegetables, and susceptibility to marketing practices of industry such as the electronic cigarette manufactures.

Smoking

According to the American Cancer Society, the use of tobacco products continues to be the single largest preventable cause of disease and premature death in the U.S.[60] Tobacco smoking causes more than lung cancer (the number one cancer killer on long island). Tobacco use also increases the risk of cancers of the mouth, nasal cavities, larynx, pharynx, esophagus, stomach, colorectal, liver, pancreas, kidney, bladder, uterine cervix, ovary, and myeloid leukemia, and evidence is accumulating that suggests long-term, heavy smoking increases the risk of breast cancer.[65]

More than 25,000 New Yorkers die prematurely each year as a result of smoking.[66] According to the NYSDOH the age adjusted percent of adults in Suffolk County who smoke has decreased from 17.5% in 2008-2009 to 12.3% in 2013, under the NYS 2017 objective of 15%.[4, 6]

Childhood Smoking

The NYTCP (New York Tobacco Control Program) projects that 389,000 youth age 0-17 will die as a result of smoking if rates remain constant.[66] The good news is smoking rates among high school students in New York State (2012) are down to 11.9%, a 56% decline since 2000. Middle School rates have declined to 3.1% in 2012 from 10.2% in 2000. [67]

However, children are influenced to smoke by seeing ads in magazines, displays in stores, stars

smoking in movies and parental and peer influences. In addition, the introduction of new forms of tobacco use such as e-cigarettes, hookahs, hookah pens, and the resurgence of smokeless products have given children multiple new ways to become addicted to nicotine. According to CDC, 7.3% of New York youth used smokeless tobacco in 2011.[68] Once addicted, they may choose more traditional forms of tobacco such as cigarettes to prevent withdrawal from nicotine.

Smoking and Mental Health

CDC, in a Vital Signs release, reports that smoking rates among U.S. adults with a mental illness is 70% higher than for adults without mental illness.[69] In addition, they smoke more cigarettes per month and are less likely to quit than those without mental illness. This group presents unique challenges for smoking cessation programs.

Smoking in pregnancy

Smoking is a risk factor of concern in pregnancy. It can result in miscarriages, low birth weight or premature babies, as well as many health issues for children born to a woman who smokes. In New York State (excluding New York City), in 2011, about 11% of women indicated that they smoked during pregnancy.[70] There are no available statistics for Suffolk County. The SCDHS Health Centers carefully review smoking history in the prenatal interview and are alert to any woman who shares the information that she is smoking at any time in her pregnancy.

Those women who admit to smoking during pregnancy are referred to the SCDHS "Learn to be Tobacco Free Program" if they consent. The women are telephone-counseled by an educator with this program. If they refuse this option, the prenatal nurses and providers provide the patient with step-by step teaching and reinforcement using the self-care handbook "Quit Smoking for Your Baby and You."

Obesity

Obesity and overweight are currently the second leading preventable causes of death in the United States.[71] Subsequently, the rates of obesity in the US, New York State, and Suffolk County are recognized as a major public health challenge. The obesity epidemic among young and old individuals is the number one public health nutrition problem throughout the nation including Suffolk County. Overweight is defined as a BMI (Body Mass Index or weight / height^2) between 25 and 30; obesity is defined as a BMI of 30 or more. Poor nutrition has been associated with chronic diseases such as coronary heart disease, Type 2 diabetes, stroke, hypertension and osteoarthritis requiring costly medical intervention. Type 2 diabetes is now being diagnosed in school age children. Increased incidence of several cancers has also been linked to obesity. The health care costs of treating these chronic diseases continue to escalate, and strain our health care system.

Childhood Obesity

Obesity rates among children and adolescents have tripled over the past three decades. Currently, one third of New York's children are obese or overweight.[71] From 2008 to 2010, 31.7% of all students in Suffolk County were overweight or obese.[2] For Suffolk County preschool children, 17.6% were overweight and 21.7% were obese compared to the NYS average of 16.8% overweight and 14.4% obese in 2011.[72] In Suffolk County, 29.1% of elementary students and 35.5% of middle school and high school students were overweight or obese from 2008 to 2010.[2] According to the latest CDC August 2013 report, the obesity rate amongst preschool age children declined from 2008 to 2011 in 19 states and US territories, including New York State. Preschool children who are overweight or obese are five times more likely to be overweight or obese as adults who develop heart disease, diabetes and cancer.

According to the Youth Risk Behavior Surveillance System YRBSS, 73% of New York State high school students drank a can, bottle or glass of sugar-sweetened soda during the seven days before the survey, 21.4% drank one or more per day and 14.3% drank two or more per day. Almost half of students did not meet minimum standards for physical activity, with 13.3% reporting they did not participate in sixty minutes of physical activity on any day in the week before the survey. Just over half (51.5%) reported participating in 150 minutes or more of aerobic physical activity. In addition, 30.6% reported watching three or more hours of television and 33.5% said they used the computer three or more hours per day on an average school day.[26]

The following charts are statistics gathered from the 2008-2010 students' weight statistics category reporting system as of July 2012.[73]

Figure 39a. Percentage of Elementary to High School Children Categorized as Obese (BMI>95%)

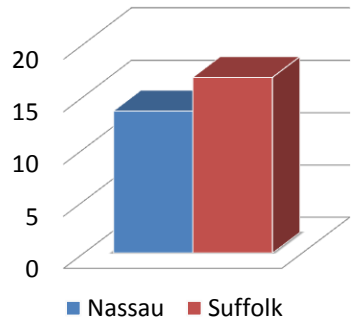
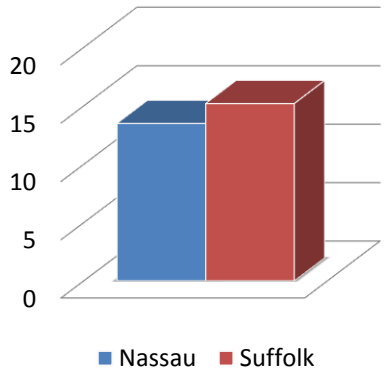
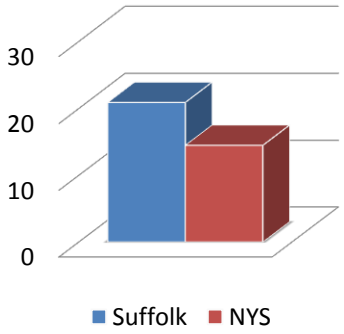


Figure 39b. Percentage of Elementary to High School Children Categorized as Overweight and Not Obese



According to the NYS Pediatric Nutritional Surveillance System with data as of July 2012, the percentage of WIC participates ages 2-4 years old that are obese is 20.9% in Suffolk County, in comparison to the NYS total of 14.5% as illustrated below.[7]

Figure 39c. Percent of WIC Participants age 2-4 that are Obese



According to the Student Weight Status Category Reporting System 2010-2012, 17.5% of children and adolescents are categorized as obese.[73] Children and adolescents growing up today with weight problems may not live as long as their parents. These obese and overweight children, and parents of such children, are in need of counseling and education in order to increase their chances of fighting the obesity epidemic. As for the ones who are not overweight, they too are in need of such education to prevent the risk of obesity.

Adult Obesity

The percentage of New York State adults who are overweight or obese increased to 60% in 2008.[71] The age-adjusted percentage of Suffolk County adults who were overweight or obese during the period of 2008 to 2009 was 59.6%.[2]

According to the 2011 New York State Behavioral Risk Factor Surveillance System report (BRFSS), overweight and obesity affects genders, all age groups, races, and income and education levels.[75] Prevalence of overweight and obesity are affected by an individual's race, sex, education and income level. Adults 55-64 had the highest rates of obesity at 31.2% and those 18-24 had the lowest at 9.5%. Whites (non-Hispanic) had the lowest rates of obesity at 23.6% and blacks (non-Hispanic) had the highest at 32.5%. Those with incomes over $75,000 had the lowest rates of obesity at 20.2%, while those with incomes of $35,000 to $49,000 had the highest at 28.5%. College graduates had the lowest rates of obesity at 18.2% and those with less than a high school diploma had the highest at 27.5%. Individuals who reported a disability reported obesity rates of 34.9% as opposed to 21.1% for those without a disability. Obesity in adults is now a contributing factor to the decrease in life expectancy, and accounts for 18% of deaths according to a recent report.[4]

According to the CDC 2009-2010 NHANES (National Health and Nutrition Examination Survey) data, the prevalence of obesity among adults 20 to 74 years old has confirmed the escalation of overweight and obesity amongst children and adolescents during the past several decades. In the latest NHANES 2009-2010 survey more than two- thirds of adults are considered overweight or obese. More than one-third of adults are considered to be obese. More than 1 in 20 individuals has extreme obesity. More women (8%) have extreme obesity compared to men (4%).[76]

Actions

On October 28, 2009, in response to the growing epidemics of obesity and diabetes, the Suffolk County Board of Health adopted amendments to the Suffolk County Sanitary Code following legislation titled "Posting Caloric Content in Chain Restaurants" and "Banning the Use of Artificial Trans Fats in Food Service Establishments." The posting of caloric content in chain restaurants took effect on October 28, 2010. The ban on the use of artificial trans- fats became effective on October 28, 2010 with respect to oils, shortenings and margarines that are used for frying and in spreads, and October 28, 2011 with respect to oils and shortenings used for deep frying of yeast or cake batter, and all other foods containing artificial trans- fats.

In January of 2011 the Suffolk County Department of Health Services received a grant through the American Recovery and Reinvestment Act to participate in New York State's iChoose600® Menu Labeling Awareness Campaign. The goal of the public education campaign was to increase awareness and usage of calorie information posted on chain restaurant menus. The campaign

involved educating consumers about consuming no more than 600 calories per meal, at three meals per day. The grant was available to the five counties outside of New York City that implemented menu labeling laws in chain restaurants. The New York State Department of Health developed and tested campaign messaging and materials for the target audience, purchased media placements in participating counties, coordinated a workgroup including representatives of participating counties and statewide partners, and conducted campaign evaluation including pre and post implementation surveys. The Suffolk County Department of Health Services developed and implemented a county public awareness plan which including activities that complemented and reinforced the media campaign launched by New York State. The campaign's success was measured by comparing the number of customers who saw calorie information in the restaurant before (Baseline) and after (Follow Up) the campaign and comparing the number of customers who used calorie information when deciding what to buy before and after the campaign. Suffolk County showed statistically significant results as shown in the figures below.

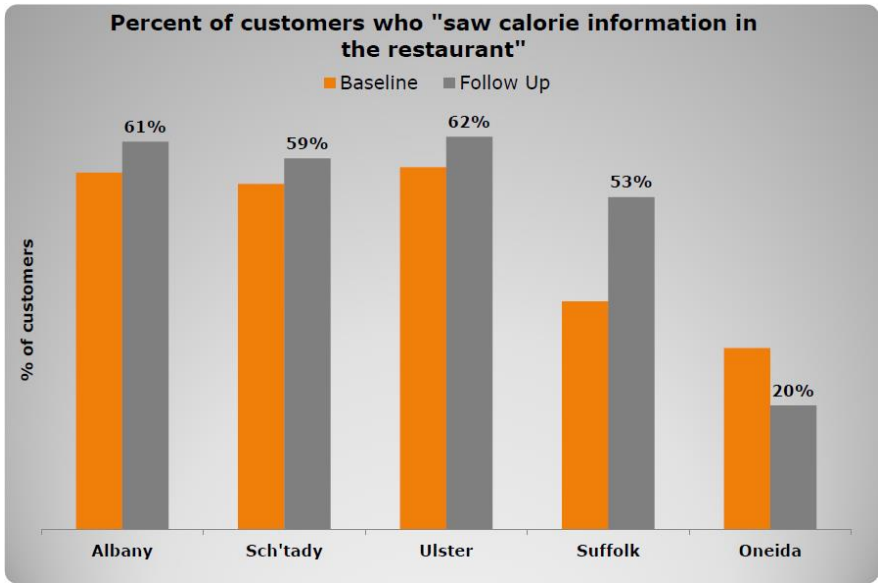


Figure 40a.

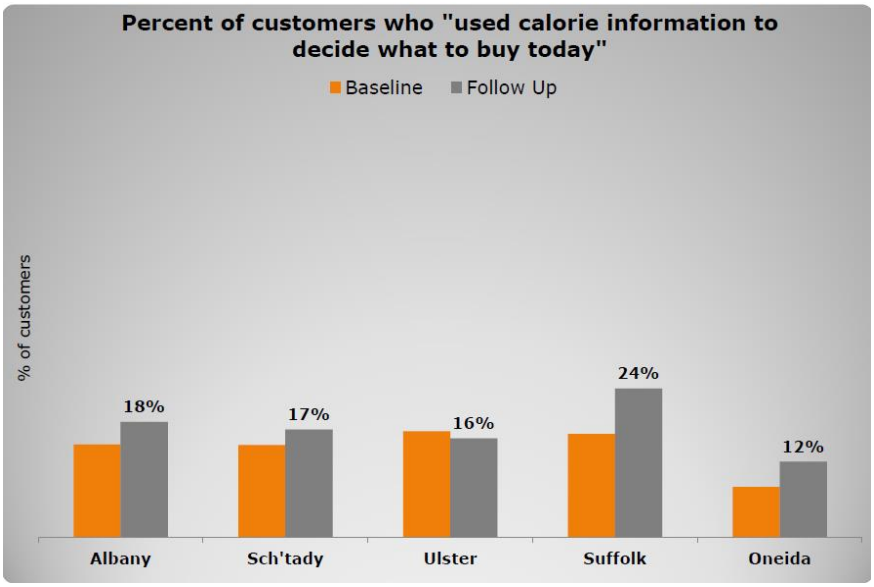


Figure 40b.

According to the most recent, 2013 BRFSS, 78.7% of Suffolk County adults report some leisure time physical activity in the past month, compared with 75.3% of New York State adults. The percentage of adults who consume sugar sweetened drinks daily is also lower in Suffolk County (17.6%) than New York State (23.2%).[6] With continued efforts, hopefully obesity rates will decline with the decline in poor diet choices and increase in physical activity on Suffolk County.

B. ENVIRONMENTAL RISK FACTORS

Transportation

Suffolk County is geographically dispersed and comprises a large suburban/rural area with ten townships: Islip, Babylon, Brookhaven, Smithtown, Huntington, Southampton, Riverhead, Southold, East Hampton, and Shelter Island. The county has limited public transportation options. Thus, issues regarding proximity to health care facilities often hinder access to care. The Long Island Railroad (LIRR), established in 1834, was instrumental in the economic development of Suffolk County. Although it has more than 700 miles of track, the LIRR functions chiefly to carry commuters from Suffolk County to and from Nassau County, Queens County and Manhattan. The LIRR is not a local light rail system. Suffolk County operates a bus system over fixed routes that cost $2.00 per trip. Even with this system in place there are large gaps between service lines. Inconveniences, including infrequent schedules and numerous transfers, represent barriers to those seeking access to healthcare services, especially those with chronic medical conditions and

limited mobility. For individuals with limited English proficiency, navigating any of the island's transportation may be difficult (e.g. interpreting schedules, routes and transfers).

The most efficient mode of transportation at present is private car. The SCDHS Health Centers are purposefully located in communities where unmet healthcare needs are greatest. Though some patients can walk or ride a bicycle to their neighborhood SCDHS Health Center, many county residents still live miles away from the nearest health care facility. Those covered by Medicaid may be eligible for certain transportation benefits such as taxi or ambulate but such services are restricted and those who are uninsured often need to rely on rides from family members and friends or services provided by local community groups.

Emergency Medical Transportation

Many portions of the County, particularly those on the islands, are remote. Often they are inaccessible by traditional ambulance vehicles and dependent on a volunteer pool of EMS providers. Together, these geographical barriers and manpower issues present challenges to providing timely and efficient emergency medical resources. The geographic areas of the County's EMS agencies range from the smallest area of 0 .51 square miles to the largest area of 57 square miles; the larger districts present unique logistical problems due to longer travel times for ambulances and EMS providers.

Land Utilization

Physical activity is important to prevent and manage numerous chronic diseases, including diabetes, heart disease, and arthritis. Physical activity is also important for reducing the burden of risk factors associated with chronic disease, such as hyperlipidemia and hypertension. Ideally, physical activity should be incorporated into one's daily routine. However, the land utilization patterns in Suffolk County can sometimes make pedestrian travel challenging. Separation of residential from shopping areas, numerous parkways, a high density of automobiles, and limited public transportation are all factors that may hinder pedestrian and cycling activities.

Geography

Farms and vineyards constitute a large portion of land use in eastern Suffolk County. Pesticides used for farming may persist in the environment and contaminate groundwater.

Suffolk County is surrounded by water, and, for some, fish are a major component of the diet. A diet high in fish is usually associated with health benefits, notably to the cardiovascular system. According to the Food and Drug Administration (FDA), nearly all fish and shellfish contain traces of mercury. For most people, the risk from mercury by eating fish and shellfish is not a health concern. Yet, some fish

and shellfish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks from mercury in fish and shellfish depend on the amount of fish and shellfish eaten and the levels of mercury in the fish and shellfish. Therefore, the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) are advising women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in mercury.

Water Contaminants

Drinking water is uniquely at risk for a variety of contaminants due to the nature and porosity of our aquifer, which consists of sand and gravel sediments. These contaminants include nitrates, volatile organic compounds, pesticides, and pharmaceutical and personal care products (PPCP) that may be introduced into our aquifers through sewage disposal, storm water drainage systems, industrial facilities, and other activities occurring on the land surface. In recognition of these conditions, Nassau and Suffolk counties have been designated as “sole source” aquifers by the Environmental Protection Agency. The SCDHS Office of Water Resources (OWR) is charged with the responsibility of protecting public health through safeguarding our drinking water and groundwater resources.

In certain areas of the County where the aquifer is known to be impacted by nitrates, pesticides, or other contaminants, the department usually recommends that applicants or homeowners connect to a public water supply when available. Many times, a public water supply system is not available or accessible, or the cost of extending water mains is not economically feasible. In these cases, the resident or homeowner has to resort to installing an individual water treatment or filter system.

One of the many benefits of the SCDHS OWR’s private well sampling program is that it in certain instances it has facilitated the extension of public water to areas where private wells were impacted with contamination.

Emerging Contaminants

The SCDHS OWR is working to sample and monitor for emerging contaminants, such as various pharmaceutical and personal care products. These include antibiotics and other human and veterinary drugs, consumer products and chemicals used to preserve them, as well as food antioxidants. Other emerging contaminants include a compound called 1,4 dioxane, and hexavalent chromium (chrome-6). Some of these compounds are listed under the EPA’s third Unregulated Contaminant Monitoring Rule and may be regulated in the near future. Many of these compounds are ubiquitous and highly leachable and mobile in groundwater that do not readily breakdown in the environment.

Soil vapor resulting from contaminated groundwater, is also an emerging issue, and is a potential exposure pathway, which can adversely affect human health. Recently, NYSDOH has begun reevaluating Superfund and other hazardous waste sites for potential soil vapor issues, particularly with respect to chlorinated solvents that may be migrating off-site.

Geographic Isolation

Geographically isolated areas sometimes are a barrier to providing services, particularly for the off shore islands. For example, monitoring water quality and inspecting beaches on Fishers Island are conducted less frequently due in part to their remote locations and the need to comply with the time constraints in sample protocols.

Beaches

The county has 990 miles of marine coastline and these coastal waters are utilized by residents and visitors for a myriad of water dependent recreation including swimming, boating, fishing and shell fishing. Laboratory limitations require setting priorities to monitor those beaches with greater potential risk of water quality problems. For this reason, beaches located on semi-enclosed harbors, poorly flushed bays, and on inland lakes are monitored on a more frequent basis than beaches on the open waters of the Atlantic Ocean or Long Island Sound.

Lead Exposure

The most common risk factor for children is living in older homes, especially in areas of poverty where the house is more likely to be in disrepair. 40.5% of all Suffolk County housing was built prior to 1950. Several older communities in Suffolk County (i.e., Greenport, Riverhead, Copiague, and Bay Shore) have been identified as high risk areas. These older communities also tend to have a greater proportion of minority families and families living at or near the poverty level, increasing the prevalence of lead poisoning in those areas. Smaller pockets of older housing are also found scattered throughout all townships.

A common misconception is that lead poisoning only occurs in lower socioeconomic areas. The average cost of a home in Suffolk County is $ 340,000. Older homes in affluent areas often sell for far more. During renovations to these older homes, children can also be exposed to lead.

Additional sources of lead exposure may include lead contaminated soil and water, imported food, pottery and cosmetics, traditional medicines and some imported children's toys and jewelry. Children may also be exposed to lead if their parents or guardians have occupations or hobbies that expose them to lead. It is critical that children be protected from lead exposure, because medical treatment options for lead poisoning have variable effectiveness. During 2012, Suffolk

County lead cases showed that the four most common sources of lead exposure found during our environmental investigations were exterior and interior paint, water, food items and occupation.

C. SOCIOECONOMIC RISK FACTORS

Health Insurance

Lack of health insurance, or a lack of adequate insurance coverage, adversely affect access to healthcare. Pockets of poverty within certain areas of Suffolk County account for limited access to health care for a number of people. The Suffolk County Department of Health Services (SCDHS) community health centers and local Federally Qualified Health Centers (FQHC) seek to reduce financial barriers to care. Health center patients are encouraged to enroll in Medicaid when eligible. Those who are not legal residents and therefore ineligible for Medicaid may be eligible for a sliding fee scale. Payment plans are available for those with financial difficulties, as it is the goal to provide service to all.

Fifty percent or more of the women who receive Medicaid for their prenatal care in Suffolk County have applied for it through the Health Department. When they apply through the Department, they are considered "presumptively eligible" and can immediately access prenatal care, obtain lab tests and sonograms, etc. Therefore, pregnant patients that do come to the health centers are given the "presumptive eligibility" even while their cases are being determined, and they are seen as soon as they present to one of the SCDHS health centers.

According to the 2008 Census Bureau 'Estimates of Uninsured,' there are approximately 342,709 uninsured children in New York State and 24,954 in Suffolk County. All children are eligible for health insurance in the U.S regardless of their residency status. New York State's Medicaid and Child Health Plus programs provide coverage for children and SCDHS health centers encourage parents to obtain the necessary coverage.[1] However not all parents of eligible children enroll them in these programs for a variety of reasons. There are barriers such as address or telephone number changes, language barriers, financial barriers concerning transportation and cultural barriers regarding medicine in general. Dental Services for children without insurance are severely limited. Prevention is the primary objective of dental education, but there still exists the need to care for children who have developed dental disease. There is a pressing need for an increase in dental providers who will treat children 3 years of age and younger who have Medicaid, or are uninsured. Programs that do exist to treat the dental needs of uninsured children have small staff and often have long appointment waiting times, up to sixth months is normal. These clinics are also far removed from the poorer socioeconomic areas of the county

making them difficult to access.

Insurance coverage is not always a guarantee against experiencing barriers to care. Historically, it has been difficult to find community based providers that accept new Medicaid or Medicare patients. Even after a provider is found, insurance may not cover all recommended screening tests and services. With the advent of the Affordable Care Act, many of these barriers are expected to be addressed. The SCDHS health centers and local FQHC provide outpatient primary and preventive care services for adults and children most at risk within Suffolk County.

Gaps in services include limited access to specialist consultations, especially for the uninsured and underinsured. Even patients who are insured encounter barriers to obtaining required specialty care. According to the *New York State Expanded Behavioral Risk Factor Surveillance System*, during the period of 2008-2009, 12.9% of total respondents (ages 18+) in Suffolk County indicated that cost prevented a visit to the doctor. Locating Medicaid participating specialists has been a longstanding problem and we are now seeing this among participating Medicare specialists as well.[4] Transportation further impacts a patient's ability to access specialists as they may be limited public transit. Specialty clinics may operate on a sliding scale fee basis but the waiting time is often measured in months. Quite frequently, a patient may foregoe further workup when it is overwhelming to arrange. Even seemingly simple screening tests can produce treatment dilemmas.

The cost of prescription drugs, even with an insurance plan, is a barrier for many seeking treatment. Staff members at the SCDHS health centers serve as a resource to patients in applying for pharmaceutical assistance programs, many of which will supply medications directly to the consumer at a reduced cost. However, these companies have unique and variable income and residency restrictions, therefore not all patients will qualify for assistance. Large retail pharmacy chains offer low-cost generic drugs for chronic illnesses, but the selection is limited.

SCDHS providers have found that the cost of medications and the cost of durable asthma medical equipment may represent a deterrent to out-patient asthma care for asthmatic persons without health insurance. Thus, for financial reasons, some SCDHS Health Center asthmatic patients defer care until they are acutely short of breath, then either walk-in to a SCDHS Health Center for urgent care or seek treatment in a local Emergency Room (ER) which is the most costly option for asthma care. This pattern of episodic asthma care results in emphasis on short term symptom relief and not long term asthma control.

Most HIV+ patients receive their dental treatment through a coverage known as ADAP, a Medicaid type assistance program specific for HIV+ patients, which provides coverage for HIV related medications (which are expensive and numerous), as well as dental treatment in a facility which is

designated an ADAP provider. Over 90% of the Suffolk County Dental health HIV + patient population receives Medicaid or ADAP assistance for medication and dental care. ADAP does not cover dental treatment received in private practitioner's offices.

Senior Citizens who are on a fixed income and Medicare may face numerous barriers with respect to access to dental care. Medicare does not provide dental services. Supplemental insurance is usually required to cover the cost of dental services. This leaves little discretionary income for dental care, which is most often neglected by the uninsured senior population. There are no clinics that senior citizens can truly receive affordable, reduced rate care.

D. POLICY FACTORS

Limited Mental Health Services

The New York State Office of Mental Health (OMH) is the lead authority for the public mental health system—they establish vision, set policy, and regulate and fund community services. Since the late 1980's, the State shifted its focus to prioritize services in the public mental health system to the seriously mentally ill. This change, coupled with a significant reduction in State psychiatric beds and the number of State outpatient slots, has led to a significant shortage of outpatient services for all but the most serious and persistently mentally ill. Many individuals who face acute crises, depression, or trauma face lengthy waiting lists or are ultimately unable to receive treatment from OMH licensed facilities.

At one time New York State operated three large psychiatric hospitals in Suffolk County which primarily served the seriously mentally ill from New York City. State-operated services are an important resource; however, over the last half century the state has reduced their presence in providing direct care services. This trend remains evident today with OMH's recent announcement of its plan to consolidate its 24 mental hospitals into 15 regional centers. In Suffolk County Pilgrim Psychiatric Center will be downsizing its census by 75 beds to a maximum of 310 beds by 2015 and Sagamore Children's Psychiatric Center will be closing. There are numerous groups examining the impact and developing plans to provide for the patient's needs.

STD Outreach Barriers

Aside from the SCDHS STD Unit, there are no additional programs in Suffolk County that provide follow up for STD reporting and partner notification. In addition, there are limited resources available that address STDs in Suffolk County. Currently, the services that address HIV/AIDS outnumber the services for STDs. And, although individuals are commonly co-infected with STDs

and HIV, because of the way in which New York State Laws are written, there is often a separation of services. In addition, New York State Law dictates a separation of data; therefore, there are no statistics available for the rates of STD/HIV co-infection in New York.

Some of the difficulties encountered by the SCDHS STD Unit include conflicting regulations associated with schools. STD testing can be legally performed on individuals <18 years old without the consent of their parents. Public Health Law states that STD Unit staff has the right to discuss these issues with the child without consent from the parent, while the Education Law states the parent must be notified of all issues pertaining to the child. This conflict in the laws is a barrier to best practices and treatment. If the STD Unit is ever going to address the rise in sexually transmitted infections among young adults, both the Department of Education and the Department of Health need to work together to address the child/young adult as a whole.

Regarding those who seek testing at private providers and then are unable to afford the cost of the prescription to treat these infections, Expedited Partner Therapy (EPT) would prove to be beneficial. Recently, Expedited Partner Therapy (EPT) was signed into law in New York State. EPT is another method of insuring that the sex partners of those infected with *Chlamydia* receive treatment. The law permits health care providers to prescribe antibiotic treatment for the partners of their infected patients even without examining the partners. Currently, partners elicited from the mandated Partner Services Program are referred to the county health centers for testing and treatment which is a free service to the patient.

Dental Policy

Dental care is an issue in Suffolk County. There are multiple issues including education, access to dental care, diet and lack of fluoridation in the water. Although dental tooth decay is largely preventable, it remains the most chronic disease of children aged 5 to 17 years- 5 times more common than asthma (59% versus 11%). Poor children have nearly 12 times more restricted activity days because of dental related illness than children from higher income families. Pain and suffering due to untreated tooth decay can lead to problems in eating, speaking, and loss of school hours. Fewer than 1 in 5 Medicaid-covered children received at least one preventive dental service in a recent year. According to the CDC, community water fluoridation has been a safe and healthy way to effectively prevent tooth decay. CDC has recognized water fluoridation as one of the 10 great public health achievements of the 20th century. Fluoride's main effect occurs after the tooth has erupted above the gum. This topical effect happens when small amounts of fluoride are maintained in the mouth in saliva and dental plaque. Fluoride works by stopping or even reversing the tooth decay process.

Tobacco Policy

Suffolk County has strict anti-smoking laws. Tobacco-related county laws that are more stringent than state laws prohibit smoking within 50 feet of the main entrance to county buildings and hospitals, prohibit the sale of blunt wrappers to persons under 19 years, prohibit the distribution of free cigarettes, and prohibit the advertising of tobacco products within two feet of products that children buy, such as toys and candy. County laws also prohibit the sale of electronic-cigarettes (e-cigarettes) to anyone under the age of 19 and prohibit smoking of e-cigarettes wherever smoking traditional cigarettes is banned. The laws also require that all tobacco products be placed behind a counter. Suffolk's compliance rate for prohibiting sales of tobacco to minors is 95% or better each year.

Suffolk County Sanitary Code mandates a vendor education class for any business registered by NYS to sell tobacco in Suffolk. To sell tobacco products, vendors must obtain a license from the NYS Department of Taxation and Finance. However, this is not mandatory for selling e-cigarettes. Any business (clothing store, appliance store, book store, etc.) can sell e-cigarettes. It is almost impossible to know where e-cigarettes are being sold and therefore to enforce age-restrictions. Also, e-cigarettes are being marketed on television and radio, getting around the ban on advertising tobacco. They have flavors such as fruit, bubble gum, and mint, which appeal to children. Children may not know they are a nicotine delivery devise.

Food Policy

The Food Policy Council was created in 2010 through the Suffolk County legislature to improve access to healthy foods and diminish disparities in access to healthy foods due to finances or distance from food stores.[78]

E. UNIQUE CHARECTERISTICS

Language Barriers

Language continues to present a significant barrier to care. Limited English proficiency poses as a barrier to residents' ability to communicate their healthcare needs, find out about available services and understand information given if not in their native tongue.
It is estimated that 20.1% of the Suffolk County Population speaks a language other than English[10]. Spanish is the predominant language used by non –English speaking residents. In addition, there are many individuals who speak languages other than English and Spanish. Meanwhile, there is a dearth of bilingual healthcare professionals and interpreters in Suffolk County. Effective

communication can be very challenging for health care professionals and workers with limited linguistic skills when providing health care to non-English speaking residents.

Language and cultural barriers are factors that particularly affect undocumented immigrants' access to affordable care. Large numbers of undocumented individuals from Mexico, Central America and South America have settled in the Brentwood, Central Islip, Bay Shore, Huntington Station and Southampton areas. In addition to language barriers, the growing immigrant workforce often fears deportation and therefore avoids seeking care.

To help address this issue the Suffolk County Department of Health Services provides the language line for interpretation. The County Executive has recently established the Language Access Order, requiring all essential documents be translated into the top six languages spoken by residents with limited English proficiency.

SECTION THREE-Assets & Resources

Suffolk County Department Of Health Services Strategic Plan

The Suffolk County Department of Health Services has developed a Strategic Plan to promote wellness and protect the public's health and environment. The Department aims to integrate health education and promotion throughout every division. In addition, the SCDHS aims to maximize educational opportunities within Suffolk County, utilizing evidence based strategies to positively impact the health and wellness of Suffolk County residents. The department will seek to maximize the use of new media for outreach and education of the public. Additionally, the Suffolk County DHS will engage staff and community partners in developing and monitoring indicators that evaluate effectiveness and efficiency, while utilizing data to communicate accomplishments and improve services. The SCDHS is committed to providing leadership and working with the local community to ensure that services are available and accessible to all residents.

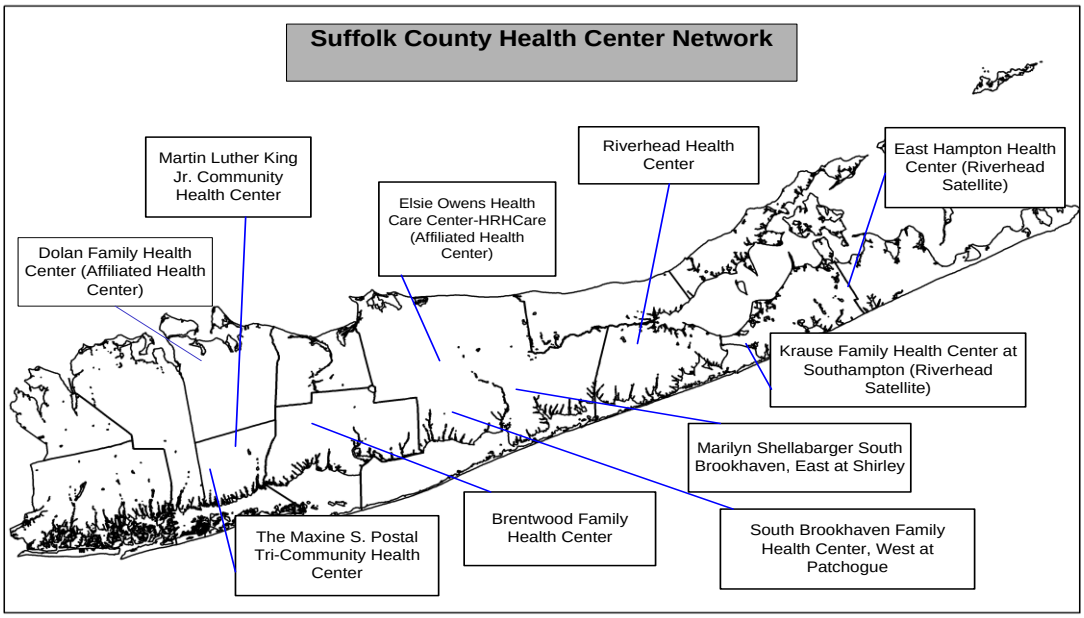
Family Health

Primary and Preventive Health Care Services

Suffolk County Department of Health Services- Health Centers

Suffolk County Department of Health Services, through its Division of Patient Care Services, has a network of Article 28 health centers. Included in this network are 8 health center sites, some of which are operated through contracts with local hospitals. These health centers provide comprehensive primary care services, including preventive care services, for patients of all ages. The health centers also have community advisory boards, which promote sensitivity to community needs and enhance the quality of services provided. The Department is also affiliated with two community health centers, the Dolan Family Health Center operated by Huntington Hospital and the Elsie Owens Health Center at Coram operated by Hudson River HealthCare, Inc. (HRHCare), a federally qualified health center (FQHC). The County will be transitioning the East Hampton and Southampton Health Centers to HRHCare in early 2014. In addition, the County has been pursuing the transition of additional County operated health centers to an FQHC operator.

The following map shows the location of the Suffolk County Health Centers, including the two health centers that are affiliated with SCDHS.



These health centers offer a comprehensive array of primary and preventive services targeting the indigent population in the County. In 2012, 51,532 of the County's most vulnerable residents made 194,912 primary and ancillary visits to the health centers. Many of the patients seen at the health centers do not have access to regular preventive care anywhere else. The centers accept Medicaid and Medicare as well as Medicaid Managed Care, Family Health Plus and Child Health Plus through the prepaid health services plan, HealthFirst. If eligible, an uninsured individual can be seen for a "sliding scale fee" which is based on verification of income information.

In addition, most centers offer Prenatal, WIC, and Family Planning services, Ryan White dental services, and a community health worker program. Two health centers have a breast clinic. The Suffolk County Health Centers were designed to offer comprehensive family centered primary as well as preventive care, to be located in underserved communities, to have connections with other community programs and to provide for community input by way of local advisory councils.

Preventive services offered at the **SCDHS Health Centers**

- Lead screening
- Vision testing
- Immunizations of both children and adults
- Well-child exams
- Alcohol and substance abuse screening by interview

- Colorectal cancer screening by way of fecal occult blood testing
- Prostate cancer screening through PSA blood testing
- Cervical cancer screening via Pap smear and pelvic exam
- Breast cancer screening by referrals and in collaboration with the Cancer Services Program
- Screening for hypertension, diabetes, and other risk factors for stroke and cardiovascular disease takes place within the context of the physical exam and routine laboratory workup of the patient.
- Comprehensive Prenatal Care Program: routinely provides screening for high risk pregnancy, includes genetic testing where applicable and universal screening for substance abuse and domestic violence.
- Referrals are made as appropriate to the County's only tertiary care center, University Hospital at Stony Brook.
- Referrals are made to WIC and the neighborhood aide program.
- The Suffolk County Department of Public Health Nursing makes home visits as necessary both during pregnancy and postpartum.

Primary and Preventive Health Care Community Resources

Community Based Primary Care Physicians

There are approximately 600 primary care doctors based in the community.

Table 50. Primary Care Physicians in Suffolk County by Specialty – July 2013

	Number
Family Practice	217
Internal Medicine	374
Pediatrics	170
OB-GYN	134

Source: New York State Physician Profile

Hospitals

According to NYSDOH, Suffolk County has eleven (11) hospitals located throughout the region. The SCDHS partners with four of those hospitals in operation of the community health centers. In addition, the Department partners with two East End hospitals for OB/GYN services at the health centers. The SCDHS Office of Health Education also partners with local hospitals for smoking cessation programs and diabetes prevention programs. SCDHS collaborates with the hospitals in encouraging preparedness efforts and in response to public health emergencies.

Federally Qualified Health Center in Greenport
Hudson River HealthCare also operates a Federally Qualified Health Center (FQHC) in Greenport, one of the easternmost towns on the North Fork of Long Island. Services available include family and internal medicine; prenatal care-midwifery services; and women's health. Like other FQHCs, patients have access to affordable healthcare and no one is denied care based on ability to pay.

Long Island Health Collaborative
This body was created as a collaboration between Long Island Hospitals, Suffolk & Nassau Departments of Health, Community Organizations & colleges aimed towards support and development of projects that improve the health & wellbeing of the Long Island Population. The group focuses on obesity prevention, chronic disease prevention and access to chronic disease management & mental health and substance abuse.

Home Health Care
Beside the Suffolk County Department of Health Bureau of Public Health Nursing, there are six (6) other Certified Home Health Agencies and six (6) Long Term Home Health Care Programs along with two (2) AIDS Long Term Home Health Care Programs in Suffolk County. NYS is transferring all Long Term Home Health Care Programs into managed care.

Other Long Term Care Programs in Suffolk County are located in the Western area of the County. There is also one that covers the Eastern portion of the County as well as one that covers Patchogue and surrounding communities.

The **Department of Social Services (DSS)** is a resource for the Suffolk County residents and can provide heat and food on an emergency basis as well as care and expertise for people who are incapacitated and without caretakers. The SCDHS Bureau of Public Health Protection collaborates with DSS when assisting these individuals.

SHOPs (Suffolk Health Outreach Partnerships)
This program was the winner of 2009 National Association of Counties (NACo) award. Utilizing barbers and beauticians to encourage health advocacy throughout communities, this program seeks to educate individuals in a culturally accepted manner on disease prevention and health promotion and is designed to be informative in a nonjudgmental fashion

- The SCDHS Office of Minority Health has conducted outreach at over 50 minority-owned barber shops and beauty salons in Suffolk County. Topics that have been addressed are obesity, high blood pressure, heart disease and stroke, layperson CPR, sexually transmitted infections and HIV, and breast & prostate cancer. SCDHS Office of Minority Health has helped several shops distribute free condoms made available by New York State Department of Health, as lack of access to condoms remains a reason for higher rates of

sexually transmitted infections in minority communities.

- As an outgrowth to the SHOPs program SCDHS Office of Minority Health has also directed outreach at over 20 men's and women's shelters and group homes.

Annual 'Taking the Road to Eliminate Health Disparities' Conferences
Since 2006, these SCDHS Office of Minority Health conferences are geared towards public health professionals and community leaders, and have covered such topics as an overview of health disparities, HIV/AIDS, obesity, cancer, diabetes, and cultural competency & language access. Average attendance for these conferences is 150. The 8th annual conference in 2013 covered 'Multicultural Issues in Pre-Hospital and Emergency Care', exploring cultural competency in first responders and disparities in trauma and other conditions requiring emergency care in minority populations.

Culturally and Linguistically Appropriate Services (CLAS) Initiative
In the Suffolk County Department of Health Services' Division of Patient Care Services, staff from the SCDHS Office of Minority Health has conducted cultural competency trainings with health center administrators and staff, and sponsored medical interpreting training for Spanish-English bilingual staff.

Suffolk County Gospel Health Fest
SCDHS Office of Minority Health also sponsors this novel event combining quality live Gospel music, dance, and Black History Month themed presentations in the context of a large community health fair. These events were held annually from 2010-2012, drawing an average crowd of 450 predominantly African American community members.

Resources for Future Mobilization

- According to Healthy People 2020, behavioral patterns established between the ages of 10-24 help determine risk for developing chronic diseases in adulthood. This indicates that public health advocates ought to focus their efforts on children and young adults so the school becomes an obvious focal point for "wellness education". The schools should be "safe zones" for wellness and should actively eliminate policies that discourage physical activity or encourage unhealthy eating habits. This would include mandating more school time for sports and other physical activity as well as prohibiting vending machines with soft drinks and other "junk food" which have contributed to the present epidemic of obesity.

- The Tobacco Action Coalition has used the media as a partner in a positive manner with public service messages designed to prevent young people from smoking. This use of the media to promote positive wellness messages needs to be expanded. The media can also be used to more aggressively advertise and promote the resources which already exist in our community.

- There are opportunities at the provider level as well. Many community-based providers are not aware of the low cost and subsidized services that are available. Recommendations for screening and preventive care are constantly evolving and providers have a great deal of information to keep up with. Traditionally, such services have been poorly reimbursed so there has been little incentive to provide such services as nutrition counseling or information about smoking cessation. The Affordable Care Act (ACA) mandates coverage of several preventative services (without co-payment or deductible) for some insurance plans. Those services include but are not limited to: blood pressure screenings; depression screenings; diet counseling and tobacco use. With the implementation of the ACA, the SCDHS is hopeful that primary care providers will be more interested in preventive care in the near future.

Tobacco Cessation

The **SCDHS Office of Health Education provides tobacco prevention programs** and health education for students beginning in kindergarten and continuing each year until 12th grade. Training in **HealthSmart**, a comprehensive K-12 health education curriculum, is available for Suffolk County teachers. School staff are also trained to provide pre-cessation and cessation programs for students addicted to nicotine. All curricula and training are provided free of charge to any Suffolk County public or private school. Districts also receive assistance in strengthening their tobacco control policies. Another important component is the **smoking cessation program**, which provides behavior modification and supportive pharmaceuticals to medically eligible participants. All cessation groups and programs are supervised by a nurse practitioner.

The **"Learn To Be...Tobacco Free" program** within the Office of Health Education began during 2000. The program consists of four components: school health education, community cessation, enforcement, and counter marketing/public information. The program was developed using the CDC's "Best Practices" as a guide. Community tobacco cessation programs are available at a minor cost ($50) to any Suffolk County resident, including those who are underserved. Information about the tobacco cessation classes is provided at the community health centers and physicians in the community. The dangers of environmental tobacco smoke are discussed at educational programs.

Family Planning

Suffolk County Department of Health Services Family Planning Program is a Title X Program that ensures access to family planning and related preventive health services for low income and uninsured women and men. It provides contraceptive services and related counseling. In addition, it also provides preventive health care such as breast and pelvic examinations, STI and HIV prevention education, patient education and counseling, testing and referral, HPV vaccinations, and pregnancy testing and counseling. Program staff work to assist individuals in determining the number and spacing of their children and to prevent unwanted pregnancies. This promotes positive birth outcomes and healthy families. There are six sites located in major low-income areas of Suffolk County: Amityville, Brentwood, Shirley, Riverhead, Patchogue, and Wyandanch. The Southampton Health Center services Southampton, West Hampton, West Hampton Beach, East Hampton, East Quogue, and Montauk. The Dolan Family Health Center located in Greenlawn is an affiliated center. Family Planning services are also available at the Elsie Owens Coram Health Center operated by Hudson River Healthcare Inc., a federally qualified health center.

The Suffolk County Department of Health Services Speakers Bureau works in conjunction its Family Planning program to partner with the following **community organizations** in order to reach at-risk populations:

- Options for Community Living
- Outreach Project Adult Substance Abuse Treatment Center
- Phoenix House Ronkonkoma
- Horizons Drug Counseling and Treatment Program
- Impact Counseling DWI program
- Planned Parenthood Hudson-Peconic
- Transitional Services of New York for Long Island
- Suffolk County Probation Department
- Suffolk County Correctional Facilities
- Suffolk County Office of Women's Health
- Suffolk County Office of Minority Health
- BOCES GED Program
- BOCES Western Suffolk
- Colonial Youth and Family Services
- Long Island Adolescent and Family Services
- Outreach House Residential Substance Abuse Treatment Center, Skills, Networks
- Economic Opportunity Council (EOC) of Suffolk-Adolescent and Youth Program
- Suffolk County Community College

The following linkages with **faith based agencies include**:

- Catholic Charities, and the Opening Word GED programs in
  - Amityville
  - Huntington Station
  - Wyandanch under the ministry of the Miraculous Medal Roman Catholic Church

Family Planning Community Resources

Opportunities exist for the Local Health Department to work with local organizations and agencies for example:

- In 2012, in partnership with the SCDHS Office of Minority Health, a Family Planning Services class was offered at Beauty Salons whose customers are typically minority clientele.

- The Teen Pregnancy Prevention Program was offered at Longwood Alternative H.S, Brentwood H.S, and at Western Suffolk BOCES.

- Reproductive care provided by the SCDHS Family Planning Clinic as well as teen pregnancy prevention was presented to the Boys Scout "Learning for Life" careers exploration project at Hauppauge High School, Connetquot High School, and Bay Shore High School.

- Programs on dating violence prevention or Sexually Transmitted Infections (STI) were provided to "Men and Women of the Future Club" at Brentwood Middle School Freshman Center and Bay Shore high school.

- A peer training on Family Planning Services was provided to the peer educators at Wyandanch high school.

- Family Planning Services/STI/HIV programs are provided at Suffolk County Day Reporting, Suffolk County minimum security correctional facility and to mandated clients at Phoenix House, Outreach Project in Bellport and Family Service League in Shirley.

- With an interpreter, the SCDHS Women's Health/Family Planning Program was offered at the Opening Word English for Speakers of Other languages (ESOL) students in Wyandanch and the-teen mother's support group at Patchogue Medford High School.

- Programs on Dating Violence were offered at Long Island Adolescent and Family Services.
- The SCDHS Family Planning Program was presented to residents and staff from Little Flower Residence.
- Programs that target males were provided at Transitional Services of New York for Long Island (TSLI), Horizons Counseling, YMCA the Place and Impact Counseling Center. Topics include Men's Health and HIV/STIs.
- Programs to families were offered on Family Planning /STI/HIV/Dating Violence at Haven House /Bridges.
- A Parent /Child Puberty Program was offered at an elementary school.
- A series of programs were offered to both staff and participants in the Department of Labor's Out of School Youth Enrichment Services (YES) Program.

Prenatal Care and Infant Mortality

SCDHS Prenatal Program enrolled 2,957 women in care in 2012, with 1,957 delivering through our program. The program adheres to all NYSDOH guidelines and policies, as well as American College of Obstetrics and Gynecology (ACOG) standards of care. The program screens for domestic violence and refers to the Women-Infants-Children Program (WIC). Those who are diagnosed with obesity and/or gestational diabetes mellitus are referred to the Registered Dietitian. They may also be referred to the local Public Health Nurse who will ensure their understanding of meters and diets. Women who admit to smoking during pregnancy are referred to the SCDHS "Learn to be Tobacco Free Program" if they consent. They receive telephone counseling by an educator with this program. If they refuse this option, the prenatal nurses and providers provide the patient with step-by step teaching and reinforcement using the self-care handbook "Quit Smoking for Your Baby and You." Teens are referred to the health center social workers, local Public Health Nurse, and the Minority Health Program Baby Showers. Any woman who gives birth through SCDHS's Prenatal Program is automatically connected to the SCDHS's Family Planning Program at her six week postpartum check-up, if she chooses a renewable method.

All of the women delivering thru SCDHS with Medicaid are eligible for the Family Planning Extension Program (FPEP), which provides two years of access to no cost family planning benefits, and are given that information as they leave the prenatal program. Those who are found to have symptoms of depression during their pregnancy or at the post-partum visit are referred to the

health center social worker, and staff work with the Obstetrical provider if medication is indicated. If needed, further referrals are made to mental health providers in the area. Dental services are available after the woman is enrolled in Healthfirst, as well as transportation.

Centering Pregnancy Program

In 2011 the SCDHS Prenatal Program received a grant from the March of Dimes to provide the Centering Pregnancy Program, which is group prenatal care at SCDHS Southampton and Riverhead Health Centers. We were one of 3 entities state-wide to receive this grant. This program has goals to help the women develop a support system, which may decrease their social isolation and depression, and learn more about their own bodies and health, as well as that of their infants. A total of 70 women have received care through this program to date. Centering Healthcare Institute recognized both sites as "Approved Centering Pregnancy Sites" in June 2013, after site visits and an extensive review of the programs offered.

Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age Program through the March of Dimes and Suffolk County Hospitals to curtail prematurity due to elective delivery.

Suffolk Showers – 'A Healthy Baby Begins with You'

This program was a winner of the 2010 National Association of Counties (NACo) award.
A Healthy Baby Begins with You is a national initiative from the US DHHS Office of Minority Health. The Suffolk Showers events are held quarterly in different parts of the County in an effort to address the disparity in infant mortality noted amongst African American and Latino populations. Although this initiative targets minorities, it is open to all underserved pregnant women in the county who do not have the resources and social support systems to offer and afford a baby shower. Since its inception in 2008, the Baby Shower Program has been held in: Amityville, Bayshore, Bellport, Brentwood, Central Islip, Coram, Greenlawn, Greenport, Hampton Bays, Huntington, Longwood, Mastic-Shirley, Patchogue, Southampton, Riverhead and Wyandanch.

- Information session topics include: Signs of labor and Preterm Birth & Advantages of Breast Feeding (March of Dimes), Sudden Infant Death Syndrome (SIDS) prevention & Safe Sleep methods (NY Center for Sudden Infant Death), Infant CPR and Car Seat Safety (Safe Kids Suffolk). Baby shower games are conducted throughout the day, in which expectant mothers win baby related prizes, such as gift cards, keepsake gifts, and gift baskets. Every woman receives pleasing and practical giveaways. They also receive packets of educational literature and resources.

- Surveys are handed out to baby shower participants at the beginning and at the end of the program to assess the program's effectiveness. The results consistently show improvement in knowledge of safe sleep methods, breastfeeding, car seat safety, and infant CPR between

the pre & post surveys. Through the Baby Shower program SCDHS staff has assisted and educated over 600 county residents.

- Collaborators Past and Present:
  - Suffolk County Department of Health Services - Offices of Health Education, Division of Patient Care Services and the Division of Public Health Nursing
  - Suffolk Perinatal Coalition
  - Sudden Infant and Child Death Resource Center of Stony Brook University
  - Safe Kids Suffolk
  - Suffolk Community Health Workers Program
  - Cornell Cooperative Extension of Riverhead
  - Education & Assistance Corp. (EAC)
  - An American Heart Association CPR certified instructor

Prenatal Care and Infant Mortality Community Resources

- Community Health Worker Program
- Postpartum Resource Center of Long Island
- Suffolk Perinatal Coalition
- Stony Brook University Hospital—Regional Perinatal Center
- March of Dimes
- Cornell Cooperative Extension
- Religious organizations
- Resources that address domestic violence—VIBEs, the Retreat, etc
- NYSDOH—Text4Baby initiative
- Birthright and the Newborn In Need Programs distribute furniture and clothing.
- LaLeche League assists with breastfeeding and the Post-Partum Resource Council helps with mental health issues.
- The Suffolk Perinatal Coalition is a community based not-for-profit agency providing recourses to reduce infant mortality, low birth weight and prematurity, and promote the health of women, infants and families.
- The Post-Partum Resource Center of New York is a call in center which screens, provides emotional support and gives resources for post- partum depression.

Child Health

The **Suffolk County Department of Health Services health centers** provide comprehensive primary care services for children, including preventive care services such as immunizations, well child exams, sick visits, lead screening and developmental assessments. A total of 62,755 visits of persons 0-21 years old occurred in 2011 in the health centers.

Child Health Community Resources

- The **SCDHS Bureau of Public Health Nursing** and **Division of Services for Children with Special Needs** (including Early Intervention, Preschool Special Education, and Children with Special Health Care Needs programs) provide services for children.

- Family Service League Centers provide counseling.

Lead Poisoning

Suffolk County Department of Health (SCDHS) Lead Program provides public and professional education and community outreach on lead poisoning prevention and case management where indicated. Localities must facilitate blood lead screening for each child who is uninsured or whose insurance does not cover the test. Environmental management and data to identify exposure patterns and high-risk populations for strategic planning for lead poisoning prevention at the local and State level are also provided. Program staff network with private providers at every opportunity to encourage them to do blood lead screening.

Children who are identified as having lead levels ≥ 15ug/dl are placed into case management in the Suffolk County Lead Poisoning Program. Case management includes at least one home visit by case management staff to assess the home environment, to identify potential sources of lead and to educate the parent/guardian on risk reduction activities. The case management staff coordinates medical and environmental activities and monitors the child until blood lead levels return to acceptable limits and the environment is deemed to be lead safe.

Program staff participates in a **Regional Lead Resource Center Committee** (Hudson Valley, Metropolitan New York and Long Island), along with representatives from the State Designated Lead Treatment facilities. Interaction on this committee increases staff knowledge and allows for a smooth transition to treatment facilities for children in case management.

SCDHS health centers provide access to screening at no or low cost to children. Extensive networking is done with community service groups to encourage parents to bring children to

providers for lead screening.

The **SCHDS Immunization Action Program** offers lead screening to the communities where they offer childhood immunizations.

SCDHS Public Health Sanitarians provide environmental inspections and notices of demand with abatement schedules.

Children with Special Healthcare Needs

The SCDHS Early Intervention Program is a comprehensive program designed to enhance the development of infants and toddlers with delays, minimizes potential delay among children seriously at risk, and assists families in meeting their child's special needs. Early Intervention services are most effective when they take place in the child's natural environment and when there is active family involvement.

The **SCDHS Physically Handicapped Children's Program (PHCP)** is the financial component of the Children with Special Health Care Needs Program. The PHCP is intended to be the payer of last resort after the parent or guardian has exhausted all other available areas of payment. Families that participate in the PHCP must have health insurance. The family must provide financial information to determine if they have any financial responsibility to pay for the child's services. Funding is dependent on the availability of County funds. The Physically Handicapped Children's Program is providing services to 33 children as of July 2013.

Dental Health

At **SCDHS Health Centers**, primary providers assess all children for dental health. To reduce the number of untreated dental caries, appropriate feeding practices, and the importance of fluoride supplementation are discussed. Parents are also advised of the need to have children receive bi-annual preventive examinations by a dentist. Cooperation between SCDHS and Stony Brook University allows for dental referrals for pediatric patients as well as for adults who require dental specialty care.

Children seeking dental treatment are referred through the health centers to the Child Health Plus (CHP) Program and their third party HMO dental network. Through the CHP program, patients are referred to participating dentists who are contracted to provide dental care. Currently, there are hundreds of dentists under contract, with numerous dental specialists including endodontists, oral surgeons and pediatric dentists. With more and more dentists joining the provider directory, access to care is improving. Parents are now more likely to find a provider close by and many providers are located in and around high need areas. Suffolk County Department of Health Services Dental clinics are utilized to treat HIV+ children.

Stony Brook University Dental School accepts referrals for children without insurance. Stony Brook focuses on dental care for children with special needs.

St. Charles Hospital in Port Jefferson provides dental clinics for the public at reduced rates. Medicaid is accepted and for those who do not qualify for Medicaid and have no insurance coverage, a reduced fee schedule is available. These clinics focus on physically and mentally challenged children. An orthodontia clinic is also available for those children who require treatment. Hours of operation are Monday through Friday from 8AM to 4PM. Dental residents are on call evenings and weekends for emergencies.

Stony Brook University moving Dental Van stops weekly at a number of locations in the County, including the SCDHS Health Centers.

SCDHS will continue to pursue the partnerships with Stony Brook and other organizations including the United Way of Long Island and the Suffolk County Dental Society. Participation in activities promoting **'Give Kids a Smile Day'** in the month of February represent the County's commitment to oral health education and promotion.

The **Children's Handicap Program** utilizes the Suffolk County dental clinic to conduct monthly screenings on children receiving orthodontic treatment through the Children's Handicap Program. The clinic session is usually once a month and is rotated between the Riverhead and Brentwood Health Centers.

Resources for Future Mobilization

- Networking by the Suffolk County Lead Program with the local chapter of the American Academy of Pediatrics is being pursued as a possible avenue for private provider education on lead screening.

Injury Prevention

The SCDHS Office of Health Education (OHE) offers the **HealthSmart curriculum** and teacher training to public and private schools in Suffolk County (See Health Education section). Intentional and unintentional injuries are one of the core sections of Health*Smart.* The K-12 curriculum builds each year on education and skills learned in previous years.

- The Office has developed a peer education program on suicide prevention. Students are trained to present accurate and compassionate lessons to their peers.

- A Bullying Prevention Peer Education Program is in the final stages of completion.

- The Office created an educational program and video which depicts the dangers of texting while driving. It is available to all health teachers.

- Distributes toolkits developed by the NYS Education Department and CDC that are available to coaches and parents about brain injuries related to sports.

SCDHS Division of Preventive Medicine **Falls Prevention Program** educates Suffolk County senior citizen residents how to lead healthier lifestyles achieved through public health education initiatives and outreach by promoting improving strength and balance, awareness of home hazards, the importance of monitoring vision health and medication management as well as the value of wearing safe foot wear in order to prevent falls in the living environment.

Injury Prevention Community Resources

SADD (Students Against Drunk Driving) newsletters have addressed many topics related to injury prevention including all forms of distracted driving, suicide prevention, injuries resulting from drug and alcohol use and tanning.

The New York State sponsored **Stepping On: Building Confidence and Reducing Falls program** was launched in 2010 as well as a locally designed program entitled **Staying Independent for Life.** These programs are being offered at county senior citizen centers, libraries, and other organizations targeting the senior citizen population. In 2012, the SCDHS Division of Preventive Medicine scheduled 10 Stepping On seminars reaching over 150 senior citizens. The Staying Independent for Life falls prevention education program was presented in 47 communities doubling the efforts of 2011. The attendance for the Staying Independent for Life program was over 1,500 senior citizens in 2012.

The admission criterion for these programs requires that participants are ambulatory and able to participate in falls prevention exercises. In 2012, 71 applicants for the Stepping On program did not meet this criterion but can be offered as a home based falls prevention services. The Staying Independent for Life Participants are also eligible for home based falls prevention referrals.

Resources for Future Mobilization

- Education of coaches, physical education teachers and school nurses regarding head injuries in contact sports.

- Improving access to free or low cost helmets for children to protect them while bicycling, skateboarding, or engaging in other activities that are associated with head injuries.

- The Health Department has entered into a partnership with the Suffolk County YMCA offering falls prevention education programs in the five Suffolk County YMCA facilities located in Huntington, Bay Shore, Patchogue, Holbrook and East Hampton. This relationship will provide additional venues for Stepping On and Staying Independent for life classes to be provided to Suffolk County residents. Additionally, YMCA tai chi instructors will be providing tai chi and balance improvement instruction to Suffolk's senior citizens in community centers convenient to them throughout the County.

Mental Health

Mental Health Clinics

The **SCDHS Community Mental Hygiene Division** operates three community-based **outpatient mental health clinics** located in Brentwood, Farmingville, and Riverhead. Each of these clinics provides psychiatric evaluation, psychotherapy and medication management services to the seriously and persistently mentally ill population of Suffolk County. In 2012, these three clinics provided approximately 16,905 patient visits. In addition, Court-ordered evaluations of mental competency and psychiatric assessments for sentencing are conducted at the Brentwood Mental Health Clinic. Farmingville Mental Health Clinic also provides a Dual Recovery Treatment Program, in collaboration with the Probation Department, treating individuals with co-occurring diagnoses of mental illness and chemical dependency. In 2012, the Dual Recovery Program provided 3,485 units of service to the population served.

The Farmingville MH clinic also serves as the base for **Clinic Based Family Focused Care services.** This program combines preventive, clinic, family support, peer advocacy services with community based supports and linkages utilizing the evidence-based Multi-Systemic Therapy for Youth model providing clinic and community-based services including assessment, family therapy, medication management, crisis intervention and service linkage in a solution-focused, short-term to treating troubled families. The infusion of family support and educational services into the clinic environment is a key component of these services

Chemical Dependency

The SCDHS Division of Community Mental Hygiene operates four **Opioid Treatment Programs (OTP's)** with a certified capacity of 1,150 treatment slots. In addition to providing medication-

assisted treatment (dispensing medication and providing drug counseling services), psychiatric, vocational and limited medical services (TB, HIV and viral hepatitis testing, hepatitis A and B vaccination) are offered to all patients in treatment.

Jail Mental Health Services
There are mental health units in the Riverhead and Yaphank correctional facilities providing services to inmates in need of psychiatric care.

SCDHS Single Point of Access for Housing (SPA) coordinates all referrals for adult mental health housing in the community. The SPA housing program is for adults eighteen years or older who have serious mental illness. SPA processes applications for vacant beds in New York State Office of Mental Health (OMH) funded housing, including community residences, community residence-single room occupancy (CR-SRO), apartment treatment and supported housing. This centralization assures that access to limited housing resources is made available to those applicants who are most in need. Since its inception, SPA has received 10,298 applications and has successfully placed over 3,133 applicants: 750 of which were homeless, living either on the street or in a DSS shelter prior to moving into SPA housing.

SCDHS Children's Single Point of Access (SPOA) program coordinates high-end mental health services for children and youth with serious emotional disturbance (SED) and their families in Suffolk County. SPOA offers a centralized, coordinated referral process using a universal referral form. SPOA represents a consensus among all high-end community based and residential programs to ensure appropriate service delivery to the most needy children and youth. The program services Suffolk County residents, age 5 through 17 years, and their families.

The SCDHS Division of Community Mental Hygiene also operates the **Children's Intensive Case Management (ICM) and Multi-Systemic Therapy (MST) for Youth programs.** County staff is also available through the Alternatives for Youth program to conduct comprehensive mental health evaluations as well as individual and family therapy for families participating in this program.

SCDHS Case Management Evaluation Referral and Assessment (CAMERA)
The SCDHS Community Mental Hygiene Division's CAMERA Unit evaluates, determines eligibility and refers applications for case management and Assertive Case Management Teams (ACT) for persons with severe and persistent mental illness. Case managers assist mental health consumers with accessing services that are needed to improve their quality of life, such as outpatient treatment, vocational services, disability benefits, housing and linkage to community supports. ACT Teams provide mental health treatment in the community for high need consumers who have not been successful in traditional treatment settings.

SCDHS Court Ordered Assisted Outpatient Treatment (AOT)

The SCDHS Community Mental Hygiene Division administers the mandated Assisted Outpatient Treatment Program (AOT). Persons served by the AOT program are deemed to be at risk of harm to self or others when noncompliant with psychiatric treatment and/or medication. They are court-ordered to comply with an intensive treatment plan, consisting of an array of mental health services including, but not limited to, case management, outpatient psychiatric and medication management services. In order to be eligible for the AOT program, an individual must meet the criteria set forth by Kendra's Law, section 9.60 of Mental Hygiene Law. Since the inception of the AOT program, there have been 1,743 requests for investigations, resulting in 2,127 AOT court orders (633 initial orders and 1,494 extended or repeated orders) and 411 Service Enhancements. Under Kendra's Law, Suffolk County is responsible for arranging services and monitoring individuals under an AOT court order.

Mental Health Community Resources

The SCDHS Mental Health Division maintains oversight of 181 contracts with 37 not-for-profit providers providing services to persons dealing with mental health and substance use issues as well as individuals with intellectual and developmental disabilities.

The Division coordinates care and interacts with over 100 different community agencies utilized by our target populations. These agencies offer a variety of services to individuals with mental illness, substance abuse issues, and developmental disabilities including, but not limited to, treatment based programs including clinics, Personalized Recovery Oriented Services (PROS), and partial hospitalization, personal advocacy through case management and peer run services, educational prevention services to consumers and families, a wide array of housing and residential services, family support services, crisis intervention services, community-based advocacy, day services, vocational services, transportation, and community support services.

Among the funded providers, there are eleven OASAS/Suffolk County funded community-based substance abuse prevention providers located throughout Suffolk County that provide substance use prevention services using evidence-based strategies in schools and community settings. Their substance abuse prevention efforts focus on increasing protective factors and decreasing risk factors within their respective communities as well as the rest of the County. These providers have partnered with community coalitions to raise awareness of these serious issues. Collaborations among funded and non-funded chemical dependency service providers include the Quality Consortium, Communities of Solution, and Partners in Prevention.

OPERATION MEDICINE CABINET is a police district-wide program that enables residents to drop off unwanted, unused, or expired medications at a safe and secure location 24 hours a day, 7 days

a week. Receptacles resemble mailboxes and are placed inside each of Suffolk's seven police precincts. The initiative allows residents to use the receptacles anonymously, and its long-term objectives are to decrease cases of accidental ingestion of unknown or expired prescription drugs and to close the gateway to heroin abuse by reducing the availability of prescription drugs such as Oxycontin, Percocet and Vicodin.

Resources for Future Mobilization

It is well documented that the lifespan of persons with serious mental illness is on average 25 years shorter than that of the general population. This increased morbidity and mortality is often times due to treatable medical conditions that are influenced by several factors including inadequate access to medical care. The SCDHS Community Mental Hygiene Division seeks to integrate primary care and mental health services on site. Currently the Division is implementing two different grant funded projects that would remove barriers to medical care for persons with mental illness.

- The first initiative will make alterations to the physical structure at the Farmingville Mental Health Clinic. These renovations will provide space for the administration of intramuscular medications in an appropriate and safe setting, as well as individual and group counseling provided by mental health and medical staff directed at fostering healthy habits. The patients of Farmingville Mental Health Clinic will be able to receive preventive and ongoing monitoring of chronic illness in a setting that is familiar and comfortable to them. It is anticipated that by offering primary care services on site, the patients of the clinic will have better overall health outcomes.

- The second initiative is to partner with our Patient Care Services Division at its Riverhead Health Center site, providing psychiatrists, psychiatric nurse practitioners, and psychiatric Social workers to assist older adults with mental health and/or substance use disorders. The goal of this initiative is to identify and treat physical and behavioral health disorders more effectively by addressing health-related behavioral issues, such as smoking, overeating, and adherence to treatment, that impact on health care; and to address psychosocial issues, such as family care giving, housing, and financial problems, that also impact on health outcomes in persons 55 years of age and older.

Nutrition

NYS Hunger Prevention and Nutrition Assistance Program (HPNAP)
In Suffolk County in 2010-2011, 222 soup kitchens, food pantries and shelters were supported by HPNAP.

The Suffolk County **Woman, Infants and Children (WIC) Program** clinic offices have been co-located within each of the 8 Suffolk County health centers and 2 affiliated health centers: Amityville, Wyandanch, Brentwood, Greenlawn, Coram, Patchogue, Shirley, Riverhead and Southampton.

Since 2010 improved WIC food packages are designed to meet the updated Dietary Guidelines for Americans, Healthy People 2020, and recommendations of the American Academy of Pediatrics and the Academy of Nutrition and Dietetics (formerly the American Dietetic Association). WIC clientele can now purchase whole fruits and vegetables, whole grain bread, brown rice, lower fat milk, tofu, legumes and peanut butter are now provided. In addition, nutrition education will also be addressing overweight issues, promoting breastfeeding, and the need for increased physical activity. Breastfeeding women receive enhanced WIC food packages and can receive WIC benefits up to one year. All WIC Programs have implemented NYS DOH Fit WIC, Eat Well and Play Hard and Healthy Lifestyles initiatives. The NYS initiative iChoose600® – choosing lower calorie meals at fast food restaurants was also pilot tested by SCDHS Public Health Protection.

Nutrition Community Resources

Stony Brook Family Medicine, has WIC clinics in East Setauket, Hauppauge, Bay Shore and Wyandanch

Catholic Charities of Rockville Center WIC has an Amityville WIC clinic and plans to expand to other areas of Suffolk County.

The **Farmers Market Nutrition Program (FMNP)** offers WIC Program families and Office of Aging senior citizens to purchase locally grown fruits and vegetables at Farmer Market site locations authorized by the NYS Dept. of Agriculture and Markets. During the 2012 summer season, 8,180 SCDHS WIC families received an additional $24 (6 checks at $4) Farmer Market checks that were authorized and printed at each of the 9 WIC clinics to purchase locally grown fruits and vegetables. The SC Office of Aging provided 3,140 seniors in 2012 with an additional $20 FMNP checks to purchase locally grown fruits and vegetables.

In Suffolk County there is a number of food assistance programs designed to help the needy and / or provide nutrition related information: **SNAP (Supplemental Nutrition Assistance Program**, formerly known as Food Stamps) is administered by Suffolk County Dept. of Social Services. In 2010, 86,282 Suffolk County financially eligible individuals received SNAP benefits. **Suffolk County Office for Aging Senior Nutrition Program** operates 31 Senior Nutrition sites providing meals and snacks to eligible seniors.

Cornell Cooperative Extension's Family Health and Wellness Program have a 5 year grant with NYS DOH ending Sept 30, 2015 for "Creating Healthy Places in Suffolk County." They have collaborated with community leaders in the Riverhead, Babylon, Islip, Patchogue, Brookhaven, and Southampton, and other towns to create community gardens develop or improve walking and bike trails, and develops other innovative strategies. By creating a healthier environment in these Suffolk County communities it is easier for individuals to be physically active and to eat healthier foods.

Since 1988 Catholic Charities of Rockville Center has been the sponsoring **Long Island agency for the Commodity Supplemental Food Program** (CSFP was formerly called the FAN Program). Suffolk County income eligible seniors (60 years+), children 5 to 6 years of age and non-breastfeeding women 6 to 12 months postpartum receive monthly food packages of actual nutritious foods: canned meat, fish, vegetables and fruit, pasta, rice, peanut butter, dried legumes, juice, cereals, ultra high temperature and nonfat dry milk and cheese.

Long Island Cares, located in Hauppauge, NY is the regional Long Island food bank. It coordinates, and provides food for all the volunteer food pantries and soup kitchens. It also administers the NYS "Just Say Yes to Fruits and Vegetables (JSY) Program" that uses food demonstrations and nutrition education workshops. JSY is designed to prevent overweight and reduce chronic disease risks amongst low income families through the increased consumption of fruits and vegetables.

Island Harvest is the largest hunger relief organizations on Long Island with warehouses and offices in Hauppauge and Mineola. It provides food rescue and food collection services by volunteers which are donated to soup kitchens instead of being discarded from commercial food catering establishments and supermarkets, etc.

Rock N Wrap is a new organization that collects surplus prepared food from major sports and entertainment events on Long Island and donates it to soup kitchens.

Long Island Head Start has 19 locations and 4 Early Head Start Programs providing meals and snacks to preschoolers in 23 communities in Suffolk County.

The Child and Adult Care Food Program (CACFP) is administered by the Child Care Council of Suffolk in Commack, NY The CACFP initiative is an entitlement USDA program and is administered by NYS DOH. CACFP is a nutrition education and meal reimbursement program which reimburses 330 Suffolk County nonprofit children day care centers for nutritious and safely prepared meals and snacks served to children.

Stony Brook Family Medicine Nutrition Division has **a Community Roots project** with community gardens in 10 low income areas of the following communities: Wyandanch, Huntington Station, Center Islip, Brentwood, Bellport, Centereach, North Bellport, Gordon Heights, Southampton and the Shinnecock Reservation. Stony Brook University Hospital also has a roof top garden.

Resources for Future Mobilization

- Workplace policies promoting and supporting breastfeeding should be supported. The State will soon be launching the *Great Beginnings NY, The Future Starts with Breastfeeding* initiative that Suffolk County can also implement.

Obesity

The **SCDHS Office of Health Education** provides programs and services at the individual level, institutional level (primarily in schools), and at the community level. At the school level, the Office of Health Education has been providing the **Health*Smart* curriculum** and teacher training to Suffolk County public and private schools for more than 10 years. Senior Health Educators developed a PowerPoint presentation on sugar-sweetened beverages. Office staff serve as advisors to school districts in the development of Wellness policies. Policies address all food and drinks available on school property including lunch times and after school in cafeterias and in vending machines. Also addressed are foods served in classroom celebrations and sold for fundraisers. In addition to consumption of calories, physical activity programs are identified during school, in after school programs and during recess.

Health*Smart* addresses the risky behaviors identified by CDC that lead to morbidity and mortality in children and adolescents. Each year, lessons reinforce those of the previous years and build upon them. New information and the progression of skills that lead to a healthy life are introduced.

- In grades K-4, the nutrition and physical activity sections include lessons on eating to be healthy, choosing to eat healthy foods, drinking plenty of water, knowing and liking your

body and setting goals to move every day. Students practice skill building in decision making, interpersonal communications and goal setting.

- In grade 5, additional concepts are added, including understanding food serving sizes; healthy eating on special occasions and when eating out; analyzing influences on body image; assessing personal exercise and physical activity; and shaping peer norms that value healthy eating and physical activity. Students work on staying motivated to engage in physical activity and eating healthy. Emphasis is on increasing skills in self- assessment and management, accessing resources, decision making and goal setting.

- In grade 6, additional core concepts include: understanding food labels, limiting junk food, understanding eating disorders and how to access help, understanding healthy eating and physical activity guidelines, assessing personal food choices and activity and tracking their personal progress. New skills include demonstrating health-enhancing behaviors.

- Middle school health education is often taught by Certified Health Educators. The lessons build on the care concepts already introduced with a higher level of sophistication. Students learn about nutrients and food serving sizes; choosing healthy snacks; eating healthy at fast food restaurants; developing a more positive body image; strategies for handling weight in healthy ways; understanding disordered eating; identifying the benefits of physical activity; shaping peer norms in terms of healthy eating and physical activity and tracking and managing their nutrition and exercise goals. Skills that are worked on include accessing resources, analyzing influences, advocacy and self-assessment and management.

- For high school students; building on all previously learned materials as well as the introduction of new information. Concepts covered include: understanding and planning dietary intake; understanding media impact on body image and its influence on food choices; identifying key nutrients; assessing personal eating habits and personal physical activity patterns; understanding cardio respiratory fitness, muscular strength, endurance and flexibility and practicing strategies for increasing flexibility. Skill building focuses on sharpening all previous skills worked on in grades Kindergarten through middle school.

Obesity Community Resources

At the community level, the SCDHS Office of Health Education has participated in **Food Day events** in October for the last two years. Food Day is a nationwide celebration and movement for healthy, affordable and sustainable food and health educators have concentrated on encouraging residents to eat more fruits and vegetables and eliminating sugar-sweetened beverages.

Three staff members from the SCDHS Office of Health Education were trained in the **New York State Diabetes Prevention Program (NYSDPP)** in June of 2013. Programs will be open to overweight/obese people with at least one risk factor for diabetes. The first of the year-long programs will begin in September 2013. The Office staff will likely be able to start 3-5 programs per year. Each program has the capacity of 15-20 participants.

The institutional setting of schools is a very efficient way to reach children and adolescents with health messages and programs that attempt to modify behaviors. The Office will soon reach out to the institutional setting of worksites and offer health and wellness programming. It is unknown how many employers will be receptive to the initiative or how much of the comprehensive program they will opt to use.

Food Policy Council

This Council has members from government, food production and distribution industries, and farming and not for profit agencies. The Food Policy Council seeks to ensure that public institutions in Suffolk County including schools serve healthy meals, that Suffolk county residents have access to locally grown fresh fruits and vegetables, and to decrease inequities across race and class that contribute to food insecurity and poor health. Current projects include a **Bodega Outreach Program** that seeks to partner with local bodegas to increase visibility and availability of locally grown fresh produce in underserved areas and promote healthy eating and cooking habits.

Expanded Food and Nutrition Education Program and **Eat Smart New York-** are programs dedicated to helping limited income families and youth learn about feeding families healthy meals, cooking low cost meals, smart food shopping, food safety, understanding food labels and utilizing food resources and services within the community. Both programs are administered through Cornell Cooperative Extension of Suffolk County.

Long Island Center for Pediatric Obesity Prevention, administered by the Department of Family Medicine of State University of New York Stony Brook, coordinates with healthcare providers in Nassau and Suffolk Counties to prevent, treat, and screen for obesity in women of child-bearing years, pregnant women, and infants.

Resources for Future Mobilization

- The **Long Island Task Force on Obesity Prevention** was created in 2006 and is now coordinated by the Health and Welfare Council of Long Island. Nutrition and health professionals from Suffolk and Nassau Health Departments, WIC Programs, Nassau and

Suffolk County Office of Aging and Social Services, local universities and numerous community organizations are attempting to come up with creative messages and healthy lifestyle programs to improve the nutritional status and curb the obesity trend of Long Island residents in both Suffolk and Nassau Counties.

- Restaurants can be encouraged to modify their menus to provide more healthy food options, and to decrease the size of portions served. Although caloric content of menu choices are more readily available now, recent studies have shown that most consumers are ignoring them. More public health education is needed to encourage people to select healthier foods and snacks instead of high calorie burgers, fries as well as soda and specialty coffee or tea beverages.

- Community involvement is also essential to promote programs that emphasize healthful eating and daily physical activity including **the *Let's Move* campaign** of first lady Michelle Obama. The Let's Move campaign involve simple activities that can be done alone or as a family, brisk walking, drinking water, eating fruits and vegetables and limiting screen time. Creating and improving safe community trails and parks will promote and encourage individuals to do more walking, biking and other sports or exercise activities. School playground and sports facilities could be made available to the general public during non-school hours, especially during the summer months and on weekends. Children and adults of all athletic ability should be encouraged to play or participate in group sports activities. The community garden programs created in by Cornell Cooperative Extension staff with their NYS DOH grant Creating Healthy Places in Suffolk County should be supported.

- Within Suffolk County partnerships can be created with government officials, community leaders, school personnel and child care providers to make the necessary changes to promote healthy eating and physical activity for all residents. Daily brisk walking for 20 to 30 minutes per day is free, and is so beneficial for overall good health, and optimal weight.

- Schools in Suffolk County should not only offer healthy choices for lunch, but remove the unhealthy choices. The schools could also have some more education for children and families on obesity and healthy lifestyles.

- The Worksite Wellness Program is an opportunity to reach out to a non-traditional audience for health education activities. It will be a benefit to employees and employers.

- School districts should consider Joint Use Agreements with the communities they serve. It is an opportunity for all who reside in the district to make use of the indoor and outdoor

recreational areas and increase rates of physical activity. Schools can provide a safe place to exercise and to learn. School cafeterias could serve many uses including demonstrations on healthy preparation and cooking of foods.

- Opportunities exist to bring healthy food into areas where people do not have access to fresh wholesome food. Mobile farmer's markets have been successful in many areas. Community gardens give individuals a chance to grow their own produce.

- The County may explore opportunities to turn public land into recreational space. This can be especially advantageous in communities that do not have safe and attractive open space for outdoor activities.

- The SCDHS Office of Health Education has been asked to work with Mather Hospital on a New York State grant to reduce consumption of sugar sweetened beverages. Mather will develop a program specifically for worksites that will tie in with the comprehensive Worksite Wellness Program currently being developed by the Office. In addition, funds exist in the grant to develop a website and a media campaign.

Jail Medicine

The **Jail Medical Unit (JMU),** is the local service provider for the incarcerated population of Suffolk County and follows the guidelines and mandates as associated with the Suffolk County Department of Health Services, Division of Patient Care Services, and Division of Community Mental Hygiene Services. These guidelines include a best practices approach and meet or exceed the New York State Commission on Corrections minimum standards for the operation of a Jail Medical Unit.

The Jail Medical Unit provides inmates with medical care services for all routine medical needs, emergencies, and illnesses, both acute and chronic. Medical services are also provided for inmates undergoing drug and alcohol withdrawal issues. Dental treatment is provided as necessary. In house specialty care is provided whenever possible and includes: podiatry services, optometry services and nutrition services. X-ray and sonography services are provided on site for routine medical problems as indicated. Inmates needing more comprehensive radiographic services are seen at **Peconic Bay Medical Center**, and as needed, at the **State University of New York Stony Brook Medical Center**. Additionally, medical practitioners send inmate/patients to outside consultants as necessary.

Jail Medical Unit Programs in 2012:

- Patient/Inmate **Hepatitis Immunization Program** which administered 644 doses of the TwinRx vaccine
- **Flu Clinic** which vaccinated 524 individuals
- An updated/upgraded **diabetes education and testing program** which treated approximately 158 individuals

DISEASE CONTROL

Chronic Diseases

The **SCDHS health centers** serve patients who present with symptoms/diagnoses of chronic illnesses, including cardiovascular disease, diabetes, asthma, and arthritis, as well as those who experience episodic illnesses, such as upper respiratory infections, urinary tract infections, etc. SCDHS operates a tobacco cessation program; avoidance of tobacco is important to prevent cancer, cardiovascular disease, and respiratory disease. On-site education counseling is provided by Registered Dietitians (RDs) and Registered Nurses (RNs), who are Certified Diabetes Educators (CDEs).

The **SCDHS Diabetes Education Program** team members work in collaboration with health center staff to provide multidisciplinary care, serve as resource persons for health center staff regarding diabetes related concerns, and facilitate community presentations.

Low cost **pharmacies**, which offer $4.00 pricing for a 30-day supply and $10.00 pricing for a 90-day supply of many generic drugs prescribed, are located throughout Suffolk County. These pharmacies are extremely valuable resources for those with chronic illnesses, including diabetes, asthma, arthritis, hypertension, cardiac conditions, lipid disorders, and mental illness. Most pharmaceutical companies offer special programs for patients who cannot afford medication.

Chronic Diseases Community Resources

Cardiovascular Disease

- **American Heart Association,** - Mission: "Building healthier lives, free of cardiovascular disease and stroke" – supports local programs, offers online education (www.americanheart.org); support groups, held in eastern Nassau County, are open to Suffolk County residents

- John T. Mather Memorial Hospital, in Port Jefferson, NY, sponsors "**Perfect Plates," a restaurant program** supported by the American Heart Association, which "partners with restaurants throughout Suffolk County to help increase the availability of smaller portion options on the menus."

- Huntington Hospital sponsors the "**Women's Heart Program**". This program uses a multidisciplinary approach to educate women about heart disease, provides them with an assessment of their risk, and ensures that they have access to the prevention, diagnostic, and treatment services they require.

- Stony Brook University Medical Center, co-sponsors the "**Smith Haven mall Walkers Club**, which meets monthly. Activities include walking, blood pressure screenings, and informative lectures.

Diabetes

- **American Diabetes Association (ADA)** –funds research, publishes scientific findings, provides information and other services to people with diabetes, their families, health care professionals and the public, and advocates for the rights of people with diabetes," participates in community programs; offers online education. www.diabetes.org

- **JDRF (Juvenile Diabetes Research Foundation)** –offers focused support groups in Suffolk County for people with type 1 diabetes, such as "Partnering with Parent," for parents of a child diagnosed with diabetes, "Teen Talk," for teenagers (ages 13-19) coping with diabetes, and support groups for adults. This agency also provides online support. www.jdrf.org

- Six hospitals in Suffolk County (in addition to SCDHS/Cornell Cooperative Extension collaboration) provide diabetes self-management education.

- Several hospitals/agencies sponsor support groups/clubs for children and adults with diabetes.

- In Suffolk County, there are seven (7) nationally recognized/accredited **diabetes education programs.** These programs are recognized or accredited by Centers for Medicare and Medicaid Services (CMS) and are able to successfully bill Medicare and other third party insurers for the provision of Diabetes Self-Management Education/Training (DSME/T).

- *IPRO Center for Patient and Family Centered Care* offers a six-week **Diabetes Self-Management Program**, free of charge, at several community locations in Suffolk County. Workshop participants set weekly behavior change goals and learn to take better control of their disease. These workshops are free and primarily targeted to Hispanic/Latino Medicare beneficiaries with diabetes. Interested residents may call 1-800-671-1841 for additional information, including workshop locations.

Cirrhosis

- **The American Liver Foundation's** support services provide information about liver disease, resources and emotional support to patients, family members and caregivers. www.liverfoundation.org. The Greater New York Chapter can be reached at 212 668-1000.

- For those whose cirrhosis is due to alcohol abuse, **Alcoholics Anonymous (AA)** "is a fellowship of men and women who share their experience, strength and hope with each other that they may solve their common problem and help others to recover from alcoholism." Meetings are held at over 90 locations throughout Suffolk County. Website: www.suffolkcountyny-aa.org 24 Hour Hotline: 631 669-1124.

Arthritis

The Arthritis Foundation, Long Island Chapter, www.arthritis.org/chapters/long-island, serves Nassau and Suffolk Counties. This local chapter has services ranging from education, literature, lectures presented across Long Island, Telephone Help Line, land and water exercise programs, support groups and special topic seminars. Arthritis Self Help Courses are conducted at various sites in our community. These courses offer an in depth look at the disease and teach coping techniques.

Asthma

The **SCDHS "Asthma Action Plan"** enables patients/families to become pro-active and anticipatory with respect to the appropriate use of asthma medications and how to manage asthma exacerbations. It is used throughout the SCDHS Health Center network as an education and communication tool between the provider and the patient/family.

The SCDHS designed, created, developed content for and distributed 250 canvas carry-alls called "*Asthma Toolbags*" containing asthma education materials in English and Spanish that were distributed to SCDHS-Health Center patients/families with asthma.

The SCDHS staff collaborates with community-based organizations including **"Mothers Groups"** that address asthma-related health concerns of medically underserved and indigent pregnant women, chiefly from the Hispanic community.

SCDHS staff attends **community health fairs** to increase asthma awareness and provide asthma education.

Asthma Community Resources

The Asthma Coalition of Long Island is a multidisciplinary coalition that utilizes its resources to benefit children with asthma and provides support and advocacy for public policy changes needed to implement programs. Its community members include health care providers, schools, community organizations, individuals with asthma, etc.

American Lung Association of New York State Open Airways for Schools provides a bi-lingual, six session program for children ages 8-11 to teach them how to better deal with their asthma. This program is free.

John T. Mather Memorial Hospital Asthma Education Workshop and Pediatric Asthma Workshop are programs designed to help individuals manage asthma in their daily lives. The program educates family and friends about the effects of asthma. Programs focus on the identification of asthma triggers, self-monitoring, proper use of treatment devices and effective lifestyle management. The program also provides speakers to community groups and schools.

Southside Hospital Asthma Support and Education Group offers scheduled meetings focusing on asthma education and provides professional guest speakers

Cancer

Addressing the cancer needs in Suffolk County transcends many program areas in the SCDHS, including Patient Care Services, Office of Minority Health, Office of Health Education, and the Cancer Awareness and Environmental Health Assessment Programs.

The SCDHS Division of Patient Care Services operates eight family health centers, and is affiliated with two family health centers. Patients with suspected cancer are referred to an appropriate specialist.

The **Riverhead Health Center** provides mammography services. In 2012, a total of 302 mammograms were performed at County health centers.

In terms of services, the SCDHS Division of Patient Care Services provides cancer screening and works closely with the **Cancer Services Program (CSP)** in Suffolk County. The SCDHS Health Centers refer some breast, colorectal, and cervical cancer services to the CSP.

Through the **environmental health risk/environmental toxicology program**, the Department evaluates the potential for exposures in the environment to impact public health. The program addresses constituent concerns regarding cancer, especially perceived cancer clusters in close proximity to environmentally contaminated sites or sites in the process of remediation and works closely with the New York State Department of Health on these situations. The program evaluates groundwater, indoor air and soil vapor data for potential public health risks and assists in communicating potential risks to the public. This program also provided input and oversight to the risk assessment conducted during the development of the Generic Environmental Impact Statement for the Vector Control Long Term Plan and continues to evaluate new pesticides under consideration.

The Department has also been closely involved in the investigation of potential exposure pathways related to various hazardous waste sites such as:

1. Former Manufactured Gas Plants (e.g., Bay Shore MGP, Babylon MGP, Patchogue MGP)
2. Bianchi-Weiss Greenhouses
3. Speonk groundwater plume
4. Calverton Naval Weapons Site
5. Brookhaven National Laboratory Peconic River Cleanup.

Suffolk County Breast Cancer Education Project

Aims to increase knowledge and intention to seek mammography screening among African American women

- A focus group of eight African American women was coordinated at First Baptist Church of Riverhead to better understand the barriers and obstacles to mammography screening. A preliminary educational brochure was created from the information gathered at the focus group, specifically geared towards African American women 40 and over.
- The educational brochures have been distributed to the congregation and pre and post surveys are being taken to see if their knowledge and beliefs around mammography screening were changed.
- Collaborators
  - Suffolk County Department of Health Services – Grants Unit, Offices of Minority Health & Health Education under the Division of Preventive Medicine
  - First Baptist Church of Riverhead.

Cancer Community Resources

The American Cancer Society. The American Cancer Society supports research, patient services, early detection, treatment and education and is a resource for information about cancer, its risk factors, prevention, and treatment.

Cancer Care of Long Island provides professional support services such as education, and financial assistance to people with cancer and their families. Cancer Care offers group counseling at various locations in Suffolk County. It also offers support groups and individual counseling for children who have or lost a family member with cancer.

Cancer Services Program (CSP) provides breast, cervical and colorectal cancer screenings at no cost to women and men who do not have health insurance to cover the cost of these screenings, cannot pay for these screenings, and meet income eligibility requirements. Clients receiving positive screening results also receive diagnostic testing and are referred to treatment if needed. Through partnerships between the CSP, services are provided at the County health centers, as well as Peconic Bay Medical Center.

1 IN 9: The Long Island Breast Cancer Action Coalition - The Coalition provides a free, psychosocial community and state-of-the-art learning resource center at the Hewlett House, as well as therapy and support, education and socialization to breast cancer victims, their families and care givers. In addition, it also offers free wigs, prostheses and brassieres to uninsured people who are undergoing breast cancer treatment.

Babylon Breast Cancer Coalition is a grass-roots organization, providing an array of patient support services, education and advocacy programs, including Lend-A-Helping-Hand program, which assists with household chores, SOS, a program that assists households who have lost a family member to breast cancer, by helping to offset funeral expenses, childcare, and mental health counseling and Pink Ribbon Exercise program for breast cancer survivors.

Breast Cancer Help, Inc. is a not-for-profit grassroots organization which is committed to being a resource for information, advocacy, and support in the fight against cancer on Long Island. Breast Cancer Help Inc., through a partnership with Good Samaritan Hospital Medical Center, operates the Long Island Cancer Help & Wellness Center, where on-going support programs for cancer survivors of all types of cancers are offered. At the Cancer Health and Wellness Center programs and classes in yoga, Zumba, Reiki, reflexology, "Strength for Life" (a program specifically designed for cancer survivors) and monthly support groups is offered.

Brentwood/Bay Shore Breast Cancer Coalition, Inc., Latina Breast Cancer Support Group is dedicated to breast health using a grassroots approach to raise individual and community awareness and action and focuses on the causes of breast cancer, the need for prevention, monitoring, informed treatment and accessibility of health care. In addition, it conducts a Latino Support Group.

Colette Coyne Melanoma Awareness Campaign (CCMAC*)* is dedicated to increasing public awareness regarding the dangers and causes of skin cancer/Melanoma. CCMAC coordinates and participates in a variety of education and awareness initiatives, as well as advocating for laws and policies designed to provide protection for the UV rays.

Fighting Chance, Inc is a free-of-charge cancer counseling and resource center on the East End of Long Island. A resource guide to local cancer care resources, Coping with Cancer on the East End, is updated annually.

Have a Heart Children's Cancer Society offers assistance with medical bills, treatments, equipment, transportation, and household expenses to families whose child has been diagnosed with cancer.

The Honeysuckle Foundation for Children with Cancer provides support and assists psychosocial programs specifically targeting and identifying the needs and issues faced by children with cancer and their families. The Foundation provides educational programs for school personnel and students to increase the understanding of pediatric cancer. It works exclusively within Long Island Jewish/North Shore Health Systems.

Huntington Breast Cancer Action Coalition is a grassroots breast cancer organization that promotes breast cancer awareness through education, advocacy, focusing on prevention and support to those who have been diagnosed with breast cancer. Programs include; Prevention is the Cure, which focuses on raising awareness about the environmental links associated with breast cancer, LEAP, an educational program designed for children, a research scholarship program for students and scientists, one on one support services, Lend a Helping Hand and breast health kits.

Islip Breast Cancer Coalition serves the people of the Town of Islip confronting this disease by providing education, outreach and support. Programs that are available to Islip residents include its "Lend a Helping Hand" and Can Survive programs, and monthly support groups.

The Leukemia and Lymphoma Society, Long Island Chapter provides resource and referral material to leukemia, lymphoma, and other blood cancer patients and their families. It also offers a caregiver support group for people caring for individuals diagnosed with a blood cancer as well as a patient support group for individuals diagnosed with a blood cancer.

The Morgan Center is a not-for-profit organization that provides, free of charge, a safe environment for preschool aged children with cancer where preschool programs are offered and social interaction can occur.

A Mother's Kiss is a not-for-profit agency, formed in 1994. It provides emotional and financial support to the Long Island and Metro-New York area families of childhood cancer patients.

North Fork Breast Health Coalition works to encourage and assist in the prevention, early intervention and cure of breast cancer through advocacy, awareness, networking and research. The coalition also provides a one-time grant of up to $1,000 to those diagnosed with breast cancer. This grant can be used for such services as house cleaning, meal preparation, transportation expenses, or just a day of relaxation at a local spa. The Coalition offers yoga classes, reflexology, massage therapy and support groups.

West Islip Breast Cancer Coalition for Long Island, Inc is a non-profit 501(c)3, grassroots organization founded in 1992 "working to eradicate Breast Cancer and gynecological cancers.." The West Islip Breast Cancer Coalition provides support services to women who are undergoing treatment for breast cancer or require post-mastectomy care, with their Lend-a-Helping Hand program. The Coalition works to promote cancer and environmental awareness through education, advocacy and community outreach.

Medical Centers:

Huntington Hospital, a member of the North Shore - Long Island Jewish Health System, is a 408-bed nonprofit community hospital. Huntington Hospital offers an oncology support groups for those who have been diagnoses with cancer.

St. Catherine of Siena Hospital is a 558-bed not-for-profit community hospital. The medical center includes a Cancer Care Unit, and Breast Center.

Brookhaven Memorial Hospital Medical Center's Cancer Care Program provides treatment and supportive care for cancer patients and their families. Two of the services offered are the inpatient oncology unit and an outpatient infusion unit. Also associated with Brookhaven Hospital are the Brookhaven Breast Health Services and the Brookhaven Women's Imaging Center.

Good Samaritan Hospital Medical Center has a diagnostic and treatment cancer center which provides comprehensive cancer services, including diagnostic and treatment of cancer, genetic counseling, support groups, and educational programs for patients and their families, as well as the community.

John T. Mather Memorial Hospital is a 248-bed, non-profit community hospital providing a wide spectrum of health care services, including pain management, an infusion center, lymphedema management, and palliative care. The Fortunato Breast Health Center at Mather Hospital provides breast healthcare offering regular mammograms, follow-up care, education for patients, families

and the community, and breast cancer support groups.

Peconic Bay Medical Center, is a 182-bed community hospital with services including oncology/hematology, colorectal surgery, palliative care at the Pegasus House, a six-bed specialty unit focusing on the wider needs of seriously-ill patients and their families.

Southampton Hospital's Ellen Hermanson Breast Center offers a wide spectrum of breast health services, including education, early detection screenings and breast cancer treatment and support. The Center utilizes state-of-the-art diagnostic techniques and patients requiring a breast biopsy or breast surgery are able to take advantage of the complimentary service of Reiki and/or guided imagery. Southampton Hospital also has the Ed & Phyllis Davis Wellness Institute, which offers patients a balanced approach to managing pain, symptoms and stress related to illness.

Southside Hospital is a 341-bed tertiary hospital and a member of the North Shore - Long Island Jewish Health System. At the Frank Gulden Radiation Oncology Center, cancer patients can receive radiation treatment for cancer.

Stony Brook University Hospital is an academic, tertiary medical center with 597 beds that provides specialized care. Home to the Stony Brook University Cancer Center, with12 cancer site-specific, multidisciplinary Disease Management Teams, the Cancer Center provides a coordinated approach to diagnosis, treatment, and follow-up. The Cancer Center's mission is to also educate and partner with the community to reach the underserved populations.

Hospice Care in Suffolk County:

Hospice care refers to services that are designed for individuals with a limited life expectancy. These programs, may be in a home setting or nursing facility, and are usually coordinated by an interdisciplinary team (physician, nurse, home health aide, nutrition counselor, social worker, pastoral care counselor, and trained volunteers). Hospice care in Suffolk County is available through the following organizations:

- Brookhaven Memorial Hospital Medical Center Inc: serves residents of Suffolk County
- East End Hospice, Inc.: serves residents in the Towns of Brookhaven, Riverhead, Southold, Shelter Island, Southampton, and East Hampton.
- Good Shepherd Hospice: serves residents in Nassau and Suffolk Counties
- Hospice Care of Long Island: serves residents in Nassau and Suffolk Counties
- Visiting Nurse Service & Hospice of Suffolk, Inc.: serves residents of Suffolk County

Since April of 2005, health educators in the SCDHS Office of Health Education have used the U.S. Environmental Protection Agency's **SunWise Program** to teach children and teachers about how to protect themselves from overexposure to the sun. Since 2000, the SunWise program has worked with partners and schools to develop sustained sun-safe behaviors. Since Suffolk County began using the SunWise program, 228 teachers have been trained, so that they can use the materials in their classrooms. During the summer of 2013 health educators from the Office of Health Education visited five libraries and fourteen camps to provide the SunWise educational program. Through these outreach efforts, approximately 589 children and 64 adults were reached during the summer of 2013.

The Cancer Awareness Task Force is to educate residents of Suffolk County so that they are empowered to take action to reduce their risk and the consequences of cancer. Therefore, outreach and education is a priority of the Task Force. One of the first efforts of the Task Force was the development of a website, which has been incorporated into the SCDHS website. The Cancer Awareness website includes a Cancer Resources webpage, as well as all of the outreach material prepared by the Task Force. This includes a *Home Product Checklist,* developed by the County in conjunction with the Task Force, to assist residents in identifying healthy home product choices. The Task Force has also developed several bulletins as well as *Smart Tips* on healthy lifestyles, which are all available on the website.

The SCDHS Department, in conjunction with the Cancer Awareness Task Force, has also been hosting **Lunch and Learn programs** for County employees since 2009, on healthy lifestyle topics, with a total participation to date of 940 attendees. Additionally, three public events have been organized by the County, in conjunction with the Cancer Awareness Task Force. These included the New York premiere of the documentary ***No Family History*** which follows the diagnosis and treatment of a Long Island resident with breast cancer who had no family history of the disease. The County also hosted a **Health and Wellness Fair**, which focused on healthy lifestyles and cancer resources, as well as the ***Don't Sit, Stay Fit*** **Exercise Contest,** which solicited ideas and suggestions from the public on ways to incorporate exercise into our busy daily lives. The ideas generated through this contest have subsequently been used in our outreach materials.

Resources for Future Mobilization

- The Cancer Awareness Task Force in is the process of developing a Strategic Plan, with the goal of guiding future activities of the Task Force. Collectively, the Task Force is looking for opportunities for actions and better ways to integrate cancer prevention activities into a broad range of Department and county-wide activities. Recognizing that to fully integrate cancer (and other chronic disease prevention activities), a concerted effort to collaborate with colleagues in Economic Development, Planning and Parks and Recreation will be

necessary so that health promotion criteria can become part of community development, infrastructure development, land use and park activities.

- The Department has forged collaborative partnerships with many outside organizations. Together, we will continue to identify strategies to address cancer in Suffolk County. For example, we will continue to monitor and strive to understand the gaps and barriers to screening and treatment for racial and ethnic minorities. This includes working toward the goal of eliminating disparities in cancer morbidity and mortality through advocacy, research, and education. There needs to be focus on improving socioeconomic factors and providing educational opportunities that can help lessen cancer's unequal burden on African Americans.

Public Health-Communicable Disease

Suffolk County Department of Health Services (SCDHS) has been charged with the following Public Health Law requirements as outlined in the Official Compilation Codes, Rules and Regulations of the State of New York (NYCRR), Title 10 Health, Volume A, Chapter 1, Part 2.6, *"Health Officer to investigate cases of communicable disease, to ascertain sources of infection, to seek out contacts and to take other steps to reduce morbidity and mortality".* Under NYS Public Health law, local health departments (LHD) are mandated to provide specific core public health services. The SCDHS Bureau of Epidemiology and Disease Control staff conducts activities to meet these mandates including surveillance for disease, investigation, outbreak control, and reporting of mandated communicable diseases. Staff typically provides education to the patient, the patient's family and contacts, as well as answering health/disease related calls and inquiries from the public daily in order to assist with disease control. Occasionally it is necessary to directly provide medication prophylaxis to contacts of an individual as an outbreak control measure. Bureau clinical staff has delivered medication to contacts with limited resources. Clinical staff provides immunizations as an outbreak control measure, both individually and sometimes in mass clinics in the event of an outbreak.

Education and guidance regarding diagnosis, transmission, and treatment protocols is routinely provided to patients, their families, doctors, hospitals, laboratories, health centers, schools, camps and the public by Epidemiology staff. Staff have assisted with departmental press release development for a number of public health issues and distributed to over 160 news agencies including the school district superintendent organization, BOCES.

Epidemiology staff is on call 24 hours a day and seven days a week through the county's Fire Rescue and Emergency Services (FRES) emergency call system to receive disease reports. This 24

hour/7 day per week LHD capability is mandated by NYS Public Health Law.

SCDHS Epidemiology staff assists with the **Division's Bureau of Public Health Preparedness** efforts. Since 2001, bioterrorism preparedness has become an essential focus for public health. Clinical staff is assigned performance roles on the secure NYS Health Commerce System for communication capability in the event of public health emergencies such as a bioterrorist attack, or natural disaster such as the re-emergence of SARS, or Pandemic Flu. The CDC goal is that each county have plans to offer medication to its population (Suffolk County 1.49 million populations) within 48 hours. This goal requires detailed planning for clinic sites, training personnel to operate the sites, plans for distributing the necessary equipment and medications to the sites, and plans to sustain the sites in all aspects for a minimum of 48 hours. Primary to this activity is continuous disease surveillance by Epidemiology staff to look for the emergence of any bioterrorist or naturally occurring emergency such as an anthrax release or smallpox outbreak within the county.

Resources for Future Mobilization

Education of the public regarding appropriate public health practices (i.e. hand washing and proper handling of food) and communicable disease transmission is a method to reduce disease incidence in the community. Close collaboration with school leadership and nursing staff during outbreaks is crucial to identify additional cases and to inform the parents and staff about particular diseases and prevention methods. Educational campaigns in schools and through/by the media providing accurate information would help increase the public's knowledge in disease control methods.

Sexually Transmitted Diseases/Infections (STD/STI)

The SCDHS STD Unit is responsible for reporting Sexually Transmitted Disease morbidity and case findings to the New York State Bureau of STD Control for all of Suffolk County. Positive test reports are automatically reported to the New York State Department of Health from participating laboratories. Each and every report received is reviewed and investigated by the STD Unit staff. Contact is made with the ordering provider. At this point in the case investigation, several medical issues are discussed with the provider such as, patient diagnosis, treatment information, duration of signs and symptoms, pregnancy status and reasons for testing. Often, it is the STD unit who identifies that an individual has been inadequately or incorrectly tested and or/treated.

Many providers contact the STD Unit for assistance/consultation when making a diagnosis of early or late syphilis, congenital syphilis or syphilis affecting the neurological system.

As part of the NYSDOH grant (Partner Services) deliverable, the STD Unit is required to provide education regarding STDs/HIV to the community as well as to healthcare professionals. In

addition, the CDC has made recommendations to increase STD testing in certain populations. In turn, this has increased the need for provider education.

The SCDHS STD Unit provides free testing for STDs and assistance with partner notification for clients of the following organizations; the South Fork Community Health Initiative in East Hampton, the Long Island Gay Lesbian and Transgender Services Network in Bay Shore and the Fire Island Pines Care Center in the Pines, Fire Island.

Free STD testing and treatment is offered at all of the eight SCDHS Health Centers and at the Dolan Health Center.

Sexually Transmitted Diseases/Infections Community Resources
The Suffolk County STD Unit collaborates with **LIGALY (Long Island Gay and Lesbian Youth).**

Human Immunodeficiency Virus

The **SCDHS Health Centers** offer free HIV testing, six health centers provide HIV primary care and case management. The health centers deliver care to over 500 HIV/AIDS patients. The health centers are enrolled in the New York AIDS Drug Assistance Program (ADAP) which helps to facilitate medical service and obtain prescription drugs.

The **SCDHS Office of Health Education** provides free presentations to community organizations, schools and colleges on HIV/AIDS and Sexually Transmitted Infections (STI) prevention.

The **SCDHS Bureau of Epidemiology and Disease Control** investigates newly reported HIV/AIDS cases and provides counseling and referrals, as well as partner notification and follow up.

HIV/AIDS Community Resources

In addition to the SCDHS Health Centers, Stony Brook University Medical Center and the Northport Veterans Administration also serve the healthcare needs of many Suffolk County residents affected by HIV/AIDS. Community based programs and organizations providing counseling, case management, support groups, housing and legal services include:

- David E Rogers Center for HIV/AIDs Care
- David Project-Suffolk
- EOC of Suffolk, Inc.: The Economic Opportunity Council of Suffolk

- F.E.G.S: Federation Employment and Guidance Service, Inc.
- Haven House Bridges Inc.
- Homework's of Long Island
- LIAAC: Long Island Association for AIDS Care
- SPARC: Suffolk Project for AIDS Resource Coordination
- Thursdays Child
- United Way of Long Island

HIV Dental

The **Ryan White Dental Program** operates out of two Suffolk County Health Centers, Brentwood and Riverhead. Clinic hours vary from 3-5 days per week. Medicaid and ADAP are accepted as well as uninsured individuals. Uninsured individuals can receive care under the Ryan White Part A Grant Program. Patients do not have to be patients of the health center to become patients of the dental clinic.

Tuberculosis

The **Suffolk County Tuberculosis (TB) control program** closely monitors all aspects of tuberculosis care provided to TB cases, suspects and their identified contacts by hospitals, private physicians, and Suffolk County health care facilities through intensive nurse case management. Each TB Case/Suspected case reported to the Suffolk County TB control program is followed by a Registered Nurse (RN) Case Manager until the patient is confirmed to have a case of tuberculosis, is upgraded to having a clinical case of TB or a non-TB diagnosis is made. The RN Case Manager ensures that TB patients/suspected cases receive recommended Centers for Disease Control and Prevention (CDC) diagnostic, therapeutic and public health management. The RN case manager is responsible for all New York State Department of Health (NYS DOH) mandated TB reporting activities.

The Suffolk County TB control program wrote and oversaw the professional production and distribution of two **TB awareness/education posters and pamphlets** entitled "*Do you need a TB test..?*" and "*Your TB test was positive!*". The posters are prominently displayed at each SCDHS health center and the pamphlets are given to patients at the SCDHS health centers prior to offering free TB screening and if the TB screening is positive.

The Suffolk County TB control program wrote and oversaw the professional production a multi-language **TB education CD**. The CD has two tracks "Do you need a TB test..?" and "Your TB test was positive!" and is used by SCDHS-HC staff for TB education. Each track is in English, Spanish, Mandarin, French, Creole, Hindi, Polish, Russian, Turkish, Urdu, Vietnamese and Cantonese and delivers a message as to why TB screening is important and what to expect if your TB screening test is positive. The CD is available throughout the SCDHS-HC network.

The **SCDHS Health Centers** provide TB and Latent Tuberculosis Infections (LTBI) related services to the uninsured, under-insured and undocumented residents of Suffolk County. This is the major community resource serving our high risk population of foreign-born person from high TB prevalence countries. The Suffolk County TB control professional staff conducts annual Office of Safety and Health Administration mandated TB training at each of the SCDHS Health Centers keeping providers up-to-date on the latest CDC recommended diagnostic, therapeutic and public health management of LTBI and TB disease.

The Suffolk County TB control medical director hosts a free **yearly TB education luncheon meeting** for SCDHS health center nurses to discuss LTBI/TB and improve the understanding of the public health components of TB control.

Eight (8) **Suffolk County community hospitals** that provide in-patient care to Suffolk County's TB patients are Huntington Hospital, Good Samaritan Hospital, Southside Hospital, State University of New York Stony Brook Medical Center, Saint Catherine of Sienna Hospital, Peconic Bay Medical Center, Southampton Hospital and Brookhaven Memorial Hospital.

The Suffolk County TB control staff attends **local cultural festivals and health fairs** to increase TB awareness and TB education.

The Suffolk County TB control program has worked with the following **community groups**: Academy of St. Joseph's, ADELANTE, BOCES, Centro Corazon de Maria, Groupo Hispano de Bridgehampton, Hispanic Outreach Ministry, Latino Health Initiative, Most Holy Trinity, Outreach Project Health, P.E.A.C.E Ministries, PRONTO, Assemblies of God, Sacred Heart of Jesus and Mary, St. Agnes R.C. Church, St. John of God R.C. Church, St. John's Church's and St. Theresa's Church. Leaders from these groups that serve high risk foreign-born persons have received TB awareness and education information

Vaccine Preventable Diseases

Shots for Tots clinics are located at Pronto of Long Island in Bay Shore, Longwood Library in Middle Island, Sachem Library in Holbrook, Middle Country Library in Selden, and Brentwood Health Fair in Brentwood. In 2012 shots for tots clinics served 1,383 children and gave 4,867 immunizations.

Immunizations are also covered at the **SCDHS Health Centers** and include Dtap, Polio, Hepatitis A, HPV, Meningitis, HIB, Prevnar, MMR, Tdap, Rotavirus, and Varicella.

The SCDHS is also a part of the New York state **Perinatal Hepatitis B Program**, which tracks infants born to Hepatitis B Positive Mothers, or whose Hepatitis B status is unknown to ensure

vaccinations and appropriate care. Public Health Law Title X requires that providers identify maternal Hepatitis B carriers through screening and newborn prophylaxis, which can significantly reduce neonatal infection and the potential sequelae. New York State Public Health Law mandates that all pregnant women be tested for Hepatitis B infection and that all infants born to infected mothers should be given Hepatitis B immune globulin and Hepatitis B vaccine within 48 hours of birth. It is the goal of Public Health's Perinatal Hepatitis B Prevention Program to verify these activities by providing patient case management through communication with obstetricians, hospital infection control practitioners, nursery personnel, pediatricians and laboratories. The SCDHS Public Health Division also provides education to Hepatitis B positive mothers, their family and close contacts, and offer vaccination to sexual contacts and other household members.

There are 550 providers of child immunization services in Suffolk County, 175 of who are **Vaccine for Children (VFC) providers**. The vaccine for children program is a federal program managed by the New York State Department of Health which provides vaccines to Medicaid eligible, uninsured, under insured and American Indian/Alaska native children.

The **Suffolk County Community College** and the **Stony Brook University Nursing School** Programs Nursing Professors and students have assisted with the SCDHS' seasonal Immunization Clinics for Influenza. The SCDHS's Nurse Epidemiologists trained the students in vaccine administration technique. The nursing programs have been invited to assist with Bureau of Public Health Emergency Preparedness mass clinic exercises and for outbreak response such as the flu and Tdap clinics held as a "Superstorm Sandy" response.

SCDHS staff now provides the Office of Aging as well as libraries with other community vaccination site information as well as flyers encouraging adult immunization.

Resources for Future Mobilization

Collaboration with the Suffolk County School Nurses' Association, The Nurse Practitioner Association of Long Island, the Long Island Chapters of the National Association of Pediatric Nurse Practitioners, and the American Academy of Pediatrics, PTAs and other groups are being explored to expand the reach of the educational programs to improve immunization rates for all children. More publicity campaigns with a positive message about immunizations, possibly offering testimony of a celebrity who believes in and vaccinates his/her children might encourage more reluctant parents to immunize their children

Arthropod/Tick-Borne Disease

The Department of Health Services, Division of Public Health, Arthropod-Borne Disease Laboratory (ABDL) and Department of Public Works, Division of Vector Control. ABDL staff performs mosquito collections and data analyses. The New York Department of Health, Arbovirus Laboratories tests mosquitoes for Eastern Equine Encephalitis Virus (EEEV) and West Nile Virus (WNV). From April to September, the Division of Vector Control performs routine larval surveillance, larvaciding and adulticiding in response to mosquito surveillance, the presence of EEEV and WNV, and public complaints.

Dead-bird hotline

The SCDHS Dead-bird hotline staff determines if the birds meet the proper criteria for pickup (e.g. type of bird, dead less than 24 hours, etc.), and if the bird does, county personnel or township animal control personnel pick up the bird for testing. Since 2004, birds have been tested for WNV using Rapid Analyte Measurement Platform (RAMP) technology. ABDL staff performs the analyses of dead-bird data.

SCDHS Bureau of Public Health Protection

It is occasionally necessary to obtain blood specimens on particular individuals for disease surveillance, e.g. convalescent titers for a West Nile Virus disease confirmation, and the Bureau's clinical staff will provide this service if the individual has no primary medical provider or the cost is prohibitive.

Food/ Water Borne Disease

The SCDHS Bureau of Public Health Protection's (BPHP) Food Control Program (FCP) enforces County and State codes in food service establishments, such as restaurants, delicatessens, bakeries, taverns, caterers, mobile food vendors, temporary food service, NY State Education Department summer feeding sites, commissaries, NY State Office of the Aging feeding locations, state institutions, and schools. There are over 6,200 food service establishments, including temporary food vendors, permitted annually by the BPHP. The mission of the FCP is to provide the safest possible food service at establishments under its jurisdiction. The prevention of foodborne illness is the program's primary goal.

Suffolk County offers a traditional classroom-based **Food Manager's Course** in English and Spanish. This course is taught in three half-day sessions

- The Spanish-language Food Manager's Course was launched in 2003 since workers with language barriers prepare a significant proportion of the food sold in food service establishments in Suffolk. Since inception, over 4,000 Spanish-language Food Manager Certificates have been issued.

- Chinese food service establishments constitute another significant industry group with language barriers. A Chinese translation of the Food Manager's Manual in our Food Manager's Course is available to more effectively train Chinese food service workers.

Online Food Manager's Course was launched in 2009. The twenty lessons included in the online course can be completed during time off in less than one half-day. Since inception, 4,538 certificates have been issued to online course students. The online class is undergoing translation into Chinese and Spanish, and will soon be available.

The FCP works with the **Stony Brook Small Business Development Center (SBDC**) in assisting potential food service operators open and operate food establishments with all required equipment and permits required to safely handle food.

Food/Water Borne Disease Community Resources

In an effort to increase the number of food handlers educated in food safety and to increase access to this service, the SCDHS Food Control Program issues reciprocal Suffolk County Food Manager's certificates awarded by the following organizations:

- National Restaurant Association
- New York State Education Department
- Nassau County Health Department
- Prometric
- National Registry of Food Safety Professionals
- The American Food Safety Institute

Rabies Control

New York State and Suffolk County law require that all dogs, cats and ferrets be vaccinated against rabies. Vaccinating pets not only provides protection for the animals but also acts as a barrier to keep the rabies virus from spreading between wild animals and people. The Suffolk County Department of Health Services partners with the Suffolk County Society for Prevention of Cruelty to Animals (SPCA), Brookhaven Town, North Fork Animal Welfare League and the Animal Rescue Fund of the Hamptons and offers free rabies vaccination clinics for dogs, cats and ferrets.

SCDHS Bureau of Public Health Protection (BPHP) staff observe the health and vaccination status of domestic animals involved in bite reports. In addition, BPHP staff collects bat and animal specimens for rabies testing and disease surveillance.

Rabies Control Community Resources

- **Community Veterinarians** and **Animal Control Units** within the county's 10 townships assist with rabies and animal bite investigations.

- The **NYS Department of Environmental Conservation** maintains a list of Nuisance Wildlife Control Agents who can provide the service of evaluating and capturing wild animals in a home for a fee to the homeowner.

ENVIRONMENT & HAZARD RESPONSE

Environmental Protection

The **SCDHS Division of Environmental Quality (DEQ)** conducts a broad array of environmental health programs, which are mandated by the NYS Public Health Law and the Suffolk County Sanitary Code. In addition to serving as the county agent for the New York State Department of Health (NYSDOH), the DEQ conducts various programs under delegated authority from the New York State Department of Environmental Conservation (NYSDEC). Examples include the Petroleum Bulk Storage program and various State Pollution Discharge Elimination System (SPDES) functions (issuance of permits for groundwater discharges, inspections, etc.).

Water

The **SCDHS Office of Water Resources** is empowered by the Federal Safe Drinking Water Act, the New York State Sanitary Code, and Article 4 of the Suffolk County Sanitary Code (SCSC) to enforce drinking water regulations controlling public water supplies. To help ensure all 246 regulated public water supply systems consistently meet these regulations, SCDHS Public Health Sanitarians within the Bureau of Drinking Water (BDW) collect samples and perform a comprehensive analysis at every public supply well each year as part of their annual facility inspections. Samples are also collected from water suppliers' distribution systems on a regular basis to help ensure the finished water quality provided to residents meets all applicable standards. The Bureau's engineering staff review and approve plans for the construction and modification of various public water supply projects and performs completed works inspections on a regular basis.

Staff sample private wells upon request, and as part of well surveys initiated in response to situations where significant contamination is detected in drinking water or groundwater wells. Through this program, SCDHS staff provides education and outreach to residents and communities about their drinking water quality, potential public health effects, treatment options,

as well as any necessary follow-up actions. In many instances, sampling private wells and conducting surveys has facilitated the extension of public water to areas where pollution, flooding or salt water intrusion has contaminated private wells.

SCDHS engineering and sanitarian staff regularly work with our public water suppliers by providing outreach and assistance to help educate and inform them about existing and new state, federal and county standards, rules and regulations as these apply to their drinking water systems. SCDHS staff also helps them interpret and implement new rules and regulations promulgated by the EPA and NYSDOH. Staff offers assistance to children's camps, day schools, temporary residences, food establishments, and other facilities with respect to the adequacy of their drinking water supplies.

The **SCDHS Bureaus of Groundwater Investigation and Resources Management** perform a variety of groundwater investigations for determining the extent and magnitude of groundwater contamination. They also perform routine monitoring for pesticides and other compounds at various agricultural settings, as well as at select fresh water streams - ultimately helping to protect Suffolk County's precious drinking water, groundwater, and fresh water resources. To help with implementing these activities, the SCDHS Office of Waste Water Resources has maintained and utilized an in-house well drilling and monitoring program since 1976.

The SCDHS Bureaus of Groundwater & Resources Management conduct a variety of targeted groundwater investigations and perform routine sampling and monitoring of pesticides through the **NYSDEC's Pesticide Monitoring program**.
Additional Education / Outreach Activities:

- RAB Meetings: Staff routinely attend public meetings and provide technical and educational guidance at Restoration Advisory Board meetings regarding the Navy/Grumman site in Calverton.

- Brookhaven National Laboratory: Staff provides public outreach and education at the Citizens Advisory Committee meetings regarding the ongoing remediation activities at BNL.

- Provide training to Public water system operators through the Long Island Water Conference (LIWC).

- Pesticides: Staff provides education and outreach to various groups about the pesticide detections in groundwater and drinking water wells obtained by the SCDHS analytical data.

Water Collaboration

The SCDHS Office of Water Resources works with several governmental entities such as the NYSDOH, the NYSDEC, the USEPA, and the USGS. In addition staff cooperates with citizen advisory committees when conducting groundwater investigations or when performing groundwater investigations regarding the extent and magnitude of groundwater contamination at "Superfund" or other sites throughout the county. When necessary, SCDHS staff makes recommendations to these agencies as well as to private consulting firms concerning the methods used for remediating affected properties, or providing additional information to these groups which assist them in making improved remedial decisions. For example, SCDHS staff continues to work with the Department of Energy (DOE) and citizen advisory groups concerning the remediation of several plumes at Brookhaven National Laboratories (BNL). In addition, our office meets routinely with representatives of the US Navy, private consultants, the NYSDEC and Riverhead Advisory Board members to discuss the soil and groundwater remediation occurring at the Naval Weapons Industrial Facility, located at Calverton. As an example, as a result of SCDHS's efforts the Navy installed a pump and treat system to remediate several Volatile Organic Compounds (VOC) plumes at this site.

The SCDHS Bureau of Groundwater's staff, as part of a working group occasionally meets with the Bayshore Manufactured Gas Plant Task Force and the NYSDEC, regarding the ongoing soil and groundwater remediation occurring at several National Grid sites that were formerly operated as Manufactured Gas Plants.

SCDHS DEQ staff also routinely communicate with the public with concerns about their drinking water as well as with various civic groups, such as the Campaign for the Environment, the Group for the South Fork, members of the County Legislature, and Town officials when conducting private well surveys or when performing groundwater contaminant investigations

Recently, under SCDHS's **pesticide program**, the Bureau of Drinking Water has worked with the Suffolk County Water Authority (SCWA), local residents and the NYSDEC in extending public water to properties that were impacted with freon, MTBE, volatile organic compounds (VOC's) and other contaminants.

Fact Sheets

The SCDHS Office of Water Resources has created and circulated several 'fact sheets' on topics such "Pharmaceuticals and Personal Care Products," Pesticides in Our Water Resources," and "Bottled Water,". These documents offer up-to-date information and help educate the public, industry and other agencies about these issues.

Water Community Resources

- **American Water Works Association** - New York Section: Provides a forum for water supply professionals to assure the delivery of drinking water of the highest quality and sufficient quantity. (315) 455-2614

- **Brookhaven National Lab**: Community water supplier and Federal Department of Energy Laboratory. (631) 344-3148

- **Citizen's Campaign for the Environment**: Works to build widespread citizen understanding and advocacy for policies and actions designed to manage and protect natural resources and public health. (516) 390-7150

- **Community water supplier**: Dix Hills Water District- (631) 421-1812, Green lawn Water District-(631) 261-0874, Hampton Bays Water District- (631) 728-1079, Riverhead Water District - (631) 727-3205, Smithtown Water District - (631) 269-9202, South Huntington Water District - (631) 427-8192, Suffolk County Water Authority - (631) 563-0218

- **Water Environment Federation**: Water Environment Federation (WEF) is a not-for-profit technical and educational organization with 35,000 individual members and 81 affiliated Member Associations representing an additional 50,000 water quality professionals throughout the world. WEF and its member associations proudly work to achieve their mission of preserving and enhancing the global water environment. (800) 666-0206

- **Long Island Groundwater Research Institute**: Goal is to bring the results of scientific research to bear on the region's most pressing groundwater problems.. (631) 632-8674

- **Long Island Water Conference**: Conference of water suppliers, local health departments, USGS, NYSDEC, attorneys and consultants aiming to provide and maintain an adequate and safe water supply for future generations . (516) 931-0093

- **Calverton Restoration Advisory Board**. (631) 344-7961

- **Environmental Restoration Division**. (631) 344-5186

Waste Water

The **SCDHS Office of Wastewater Management (OWM)** serves the entire population of Suffolk County by assuring the design, construction, and operations of water and waste water facilities meet appropriate design and operational standards. OWM consists of three bureaus; the Engineering Bureau, the Construction Inspection Bureau, and the Sewage Treatment Bureau.

The major program focus is to assure that residents of Suffolk County have a safe water supply and properly functioning sewage disposal facilities. There are four main program areas with the Office of Wastewater Management; Residential Program, Commercial Program, Subdivision Program, and Sewage Treatment Plant Program.

The Office of Wastewater Management is responsible for permitting and inspection programs to assure properly constructed water supplies and subsurface sewage disposal systems for new development. The major program categories administered by this office are Sewage Treatment Plants, Single-Family Residences; Other than Single-Family Residences; Realty Subdivision and Developments; Garbage Hauling Vehicles; and Restaurant Review (review of disposal systems for proposed restaurants locating in existing buildings).

The **SCDHS OWM'S Engineering and Construction Bureaus** are responsible for the review and approval of residential applications for all new and renovated homes within the county.

The Engineering and Construction Bureaus are also responsible for the review and approval of commercial applications for all new commercial projects as well as all changes of uses that generate more sewage flow within the county.

The Engineering Bureau is also responsible for the review and approval of all land divisions and subdivision of property within the county. Each year, approximately 200 Subdivision applications are processed.

The **SCDHS OWM's Sewage Treatment Plant Bureau** reviews engineering reports, plans and specifications for the construction of all new and modified sewage treatment plants in the county and performs start-up inspections.

Waste Water Collaborations

The SCDHS Office of Wastewater Management works closely with various state and local agencies including the New York State Department of Environmental Conservation (NYSDEC), Town, and other County Agencies including Department of Public Works, Planning, and Affordable housing to ensure that projects are reviewed in a timely and efficient manner.

The Office has also reached out to various civic groups and trade organizations such as the Liquid Waste Hauler's Association, Long Island Builders Institute, and Professional Engineering Society to ensure that our standards and requirement are known and being adhered with.

Waste Water Community Resources

- **Civil Engineers and Surveyors Association**: A professional organization that provides comments on modifications to Suffolk County Code. 631) 727-2303

- **Long Island Builders Institute (LIBI)**: Association of building industry professionals whose members build most of the 5,000 or more homes produced on Long Island each year. LIBI serves as a business referral source for builders and remodelers. The division must approve all plans for water and sewage. (631) 232-2345

- **Long Island Liquid Waste Association**: A professional organization that provides comments on modifications to Suffolk County Code. (631) 585-0448

- **The New York State Society of Professional Engineers** - Suffolk Chapter: Professional society representing professional engineers. Members submit engineering plans to the division. (631) 771-2083

Pollution

The **SCDHS Office of Pollution Control (OPC**) protects the aquifers from the discharge of pollutants by performing industrial and commercial facility inspections, collecting industrial discharge samples, supervising 150 - 200 environmental remediations annually and enforcing Articles 7 and 12 of the Suffolk County Sanitary Code to reduce or eliminate discharges of pollutants to the groundwater.

Because of the Office's historic role in air pollution and indoor air quality issues, issues related to indoor air quality are typically handled by this office. The Office assists residents and businesses affected by oil spills in accordance with the New York State Oil Spill Relocation Program. The Office also investigates potential effects on indoor air quality from soil vapor intrusion from subsurface contaminants.

Pollution Collaboration

The OPC works very closely with the Environmental Protection Agency, NYS Department of Environmental Conservation and the NYS DOH. OPC provides field oversight for EPA's Class V

Underground Injection Control (UIC) program in the county, including sample collection, leaching pool remediation and UIC closure.

Pollution Community Resources

- **Sustainable Long Island**: Sustainable Long Island's mission is to promote economic development, environmental health, and social equity for all Long Islanders, now and for generations to come. (516) 873-0230

Ecology

The mission of the **SCDHS Office of Ecology** is to conduct comprehensive programs that protect and preserve the natural resources of Suffolk County and protect county residents against adverse environmental factors. The Office of Ecology performs groundwater, surface water and environmental management studies that are supported by extensive monitoring. These studies link public health, ecology, and the economy. Also, the Office performs critical regulatory functions to ensure the safety of bathing beaches, and conducts required environmental quality review for development programs. The Office collects samples from the county's marine surface waters, freshwater tributaries, and point sources, including analysis of salinity and Brown Tide.

The Office is also participating in the **Long Island Sound Study (LISS) NEP**, and the South **Shore Estuary Reserve (SSER).** The Office provides technical and administrative management for the Suffolk County Comprehensive Water Resources Management Plan, and participates on the county's numerous advisory committees dealing with environmental issues.

In the Office of Ecology, the Bureau of Marine Resources is responsible for the bathing beach program, water quality monitoring for estuary programs and investigation of Harmful Algal Blooms.

Bathing Beach Program

The bathing beach website was launched in July 2008 and enables the public to get current information on the water quality status of any permitted bathing beach. The map-based beach website application automatically retrieves water quality data from the department's laboratory, calculates appropriate geometric means, flags water quality exceedances, and makes recommendations for action based on NYS indicator criteria (enterococcus and *E.coli*). The website also provides educational content regarding beach water quality issues, links to appropriate environmental and regulatory agencies, fact sheets and guides for beach users, an injury/illness reporting form, and a mechanism for community input.

Ecology Collaboration

The **Peconic Estuary Program (PEP)** is one of 28 estuaries comprising the National Estuary Program (NEP), a federal program established to study, protect and preserve nationally significant estuaries threatened by pollution, development or misuse.

The Peconic Estuary Program (PEP) has a very active and engaged Citizens Advisory Committee which provides community input and perspective on estuary programs and projects. The PEP supports the Vessel Waste No-Discharge Zone designation with a public education campaign and assists municipalities with grants for the purchase of pump-out boats. A total of 14 pump-out boats and 2 barges have been purchased by the municipalities of East Hampton, Southampton, Riverhead, Brookhaven, Huntington, Islip, Southold, Fishers Island, and Greenport Village.

The PEP has designed and posted the website www.peconicestuary.org, and continued to issue a quarterly newsletter *PEP Talk* providing updates on current topics affecting the estuary to residents and community groups. An Estuary Live internet broadcast was co-hosted by EPA's National Estuary Program, NOAA's National Estuarine Research Reserve and the PEP. Organisms and habitats were featured (e.g. salt marshes and eelgrass beds), along with key topics such as habitat restoration, water chemistry, sediment transport, marine animal and plant species, and use of the scientific method in estuarine research.

The PEP sponsored Ludwigia peploides eradication events to remove (by hand pulling) the invasive weed from the Peconic River with volunteers from the community, representatives from the PEP, NYSDEC, The Nature Conservancy and Peconic Lake Civic Association. This is the sixth year of the project and the degree of infestation in the Peconic River and Lake System has dramatically declined as a result of these efforts. Continued monitoring for the occurrence Ludwigia is planned.

Comprehensive Water Resource Management Plan

Public involvement in the Comprehensive Water Resources Management Plan is conducted through a Steering Committee of local and state government, water supply professionals and other technical representatives which is periodically convened to provide input and to review work products.

Water quality monitoring is being conducted on a monthly basis at 22 sites on the Forge River, as part of a multi-agency effort to investigate causes of poor water quality, hyper-eutrophication and fish kills in the Forge River.

Ecology Community Resources

- **Breast Cancer Coalition**: A breast cancer information resource for the community. Network with other breast cancer groups in order to share information and work together for our common goals. (631) 273-4074

- **Environmental Defense Fund**: A national not- for- profit environmental organization. (212) 505-2100

- **Group for East End**: The Group is dedicated to protecting the environment, rural character and quality of life across the East End through public advocacy and public education. (631) 537-1400

- **Neighborhood Network**: for Long Islanders. They have three primary goals to improve water and air quality, and strengthen citizen advocacy and stewardship. (631) 963-5454

- **New York Public Interest Research Group (NYPIRG)**: Environmental and government reform organization. (631) 673-5536

- **Peconic Land Trust**: The Peconic Land Trust conserves Long Island's working farms, natural lands, and heritage for our communities now and in the future. (631) 283-0235

- **Pine Barrens Society**: An environmental education and advocacy organization focusing on protecting drinking water and preserving open space, especially in Long Island's Pine Barrens. (631) 369-3300

- **The Long Island Association**: The LIA brings together business, labor, education, government, not-for-profits, chambers of commerce and civic organizations working to make Long Island an even better place to live, work, raise a family, and do business. (631) 499-4400

- **The Nature Conservancy** (TNC): The TNC has worked with local government and elected officials to enact laws and measures to protect our environment. (631) 367-3384. **The Nature Conservancy Long Island Chapter**: (631) 329-3981 X26

- **Peconic Baykeeper**: Peconic Baykeeper is the only independent, not-for-profit advocate solely dedicated to the protection and improvement of the aquatic ecosystems of the Peconic and South Shore estuaries of Long Island. (631) 653-4804

- **Sustainable Long Island**: Sustainable Long Island's mission is to promote economic development, environmental. (516) 873-0230

Toxin Analysis

Public and Environmental Health Laboratory (PEHL)

The major responsibility of the Public and Environmental Health Laboratory (PEHL) is to perform detailed analyses for a wide array of chemical, radiochemical and microbiological parameters. The PEHL analyzes samples of public and private drinking waters as well as soils, hazardous liquids, solid waste and sewage for toxic heavy metals, radioactive isotopes, suspected carcinogenic volatile and semi-volatile organic compounds, pesticides and metabolites, pharmaceuticals, personal care products, suspected endocrine disruptors and bacteriological contamination. The PEHL provides service to monitor pool and bathing beach water to assure the safety of swimmers. The PEHL also analyzes marine water samples to monitor Brown Tide blooms and pollutants that can damage fauna, flora and appearance.

The PEHL has a volunteer hazardous material response team composed of chemists, forensic scientists, bacteriologists and laboratory technicians that is on call 24/7. This team responds to emergencies/crime scenes, when requested, and provides analytical support and scientific advice to the Suffolk County Fire Rescue Emergency Services/Emergency Management Office (FRES), Suffolk County Police Department (SCPD), and Town and County Fire Marshals and Office of Medical Examiner.

Toxin Analysis Collaboration

The PEHL also works closely with government agencies when conducting on-going studies.

Resources for Future Mobilization

Reducing Toxic Discharges Project

It is recognized that there is a significant need for more regulatory and management attention for facilities classified in medium and lower risk categories. In order to address the deficiencies in this area, the Department is undertaking a study to better define where important gaps in service exist, and to evaluate alternatives to fill those gaps.

Enhanced Pesticide Detection

Another opportunity is to expand our ability to test for additional pesticide compounds and their breakdown products as part of our typical sampling protocols and to expand our pesticide monitoring plan with the NYSDEC - particularly at various agricultural settings. Currently, our

PEHL tests for a total of 150 pesticide compounds; however, there are likely about 500 active pesticide related compounds registered for use in New York State. This underscores the limits of our ability to test for these compounds as compared with the number that are registered. This work also helps to develop trends in the number and concentration of pesticides detected in groundwater and potable supply wells. Ultimately, much of this information can be used to make informed decisions about the registration and use of existing and new pesticide compounds used in Suffolk County.

Comprehensive Water Resources Management Plan

- A comprehensive evaluation of current wastewater management practices and needs should be implemented to address existing and potential future development. A Request for Proposals (RFPs) is being prepared by the Suffolk County Departments of Public Works for wastewater management planning and Health Services (SCDHS) for evaluation of alternative on-site wastewater disposal systems.

- As the potential for aquifer contamination increases with increasing density, development rights should generally not be transferred into the contributing area for a public supply well without a local offset. In addition, discharges from new sewage treatment plants within public supply well source water areas can be minimized to the extent practical.

- SCDHS participation in storm water control should continue to be based upon the results obtained from scientific research in the field and implementation of BMPs as described in the *New York State Stormwater Management Design Manual*.

Nuisance Control

Community resources include local building and fire code officials, legislators and civic associations. Legislators and civic associations are often responsible for organizing meetings and bringing all interested parties to the table. Mortgage and property management companies have been critical allies as the SCDHS Bureau of Public Health Protection's (BPHP) navigates compliance at abandoned and foreclosed houses.

Radiation Protection

In the event of a radiological release to the environment that impacts Public Health, the Department of Health Services would issue Press Releases disseminating information as the event unfolds. SCDHS has cooperative agreements with Brookhaven National Laboratory's Radiological Assistance Program (RAP) and the NY DOH Bureau of Environmental Radiation Protection (BERP).

The general public would be provided with radiological information by the local media and will be instructed regarding what actions and precautions to take. Informational Fact Sheets and Frequently Asked Questions (FAQs) will be provided in various languages for special needs population. The same information, provided by the Centers for Disease Control (CDC) would also be posted on the SCDHS Web-Page, <http://www.suffolkcountyny.gov/Departments/HealthServices/PublicHealth/PublicHealthPreparedness/BioterrorismPreparedness.aspx> along with the Public Health Hot-Line phone number **(631-787-2200).** The Hot-Line will be staffed by several bi-lingual receptionists, including registered Public Health nurses and Community Mental Hygiene staff conversant in radiological issues.

In addition, the Suffolk County Department of Fire Rescue and Emergency Services has contracted with Emergency Communications Network to license its **CodeRED high-speed notification system**. Suffolk will use this system to contact Suffolk Residents in the event of an actual or impending emergency. The CodeRED emergency notification system is an extremely high speed telephone communication service that can deliver customized pre-recorded emergency messages directly to Suffolk County homes and business at the proven capacity of millions of calls per day. CodeRED also has high speed email and text messaging capability.

Emergency Medical Services

The **SCDHS Division of Emergency Medical Services** in the Department of Health Services was established on January 1, 1975 pursuant to an Executive Order of the Commissioner of Health Services. The Division provides direct and indirect administrative and medical oversight to Suffolk County's emergency response infrastructure under the direction of the Suffolk County EMS System Medical Director. The Division serves as the designated Regional Emergency Medical Services Program Agency and Course Sponsor for the New York State Department of Health (DOH) pursuant to the terms of Article 30 of the Public Health Law. The Division routinely assists EMS agencies with the process of recertification, providing Advanced Life Support service, incorporating Controlled Substance programs, and compliance with State regulations. The Division is highly integrated with the region's EMS provider agencies; EMS Regional Faculty, community hospital system; regional trauma system; Medical Examiner; Emergency Manager; and Police Department. The Division collaborates on quality issues with the New York State regional Bureau of EMS representative.

All hospitals, with the lone exception of Eastern Long Island Hospital on the north fork of the island, have been designated as **stroke centers** by New York State.

With the Division of EMS technical assistance, the Suffolk County Police Department upgraded its marine fleet and remains the primary designated **EMS agency in Fire Island**. Required patient care and patient restraining devices are present on all boats that evacuate patients from this remote and otherwise inaccessible part of the region. Currently, formal ambulance service only exists in the western portion of Fire Island, with services supplied by the Fair Harbor Fire Department, Saltaire Fire Department and the Ocean Beach Fire Department.

The Division of EMS coordinates a **Critical Incidence Stress Management (CISM) Program** to conduct peer-level and counselor level stress defusing and debriefings for emergency services personnel and maintains a twenty-four hours a day hotline for this program. The Division provides education relating to stress management and the CISM Team to the officers and members of volunteer agencies.

A **Continuing Medical Education program** for EMT recertification was implemented in 2001, in order to offer a flexible alternative for EMTs seeking to maintain EMT certification but unable to commit to a rigid schedule of classes. There are currently over 3,172 EMTs participating in this CME recertification program, a 38% increase in enrollment since the last Community Health Assessment in 2008.

Hospitals designated as **911 receiving facilities in Suffolk County** are: Brunswick hospital, Good Samaritan hospital, Southside Hospital, Brookhaven Memorial hospital, Southampton Hospital, Huntington Hospital, St. Catherine of Siena Hospital, Stony Brook University Hospital, J.T. Mather Memorial Hospital, St. Charles' Hospital, Central Suffolk Hospital, and Eastern Long Island Hospital. On line medical control is provided by Stony Brook University Hospital, and the Division meets regularly with the physician and operator supervisors in ongoing quality improvement efforts. Although not a 911 receiving-hospital, the VA Medical Center Northport serves the region's veteran population and is active in emergency and disaster preparedness and planning. Each hospital is designated as a clinical training venue and provides supervised clinical training opportunities for EMT's. Most of the hospitals participate in the Division's quality improvement program and conduct quality improvement sessions with representatives of the ambulance service in their catchment areas..

The **Regional Trauma System** consists of four designated area trauma centers (Huntington Hospital, Good Samaritan Hospital, Southside Hospital, Brookhaven Memorial Hospital) and one regional trauma center (Stony Brook University Hospital); the East End of Long Island currently has no designated trauma centers. A medevac program was initiated on the East End in 2001, based in Westhampton, to improve access to trauma care for victims of trauma on the East End. The EMS Division participates on the Suffolk Regional trauma Advisory Committee, which has representatives from each trauma center as well as EMS and the Medical Examiner. Prehospital

and in hospital regional trauma issues are addressed and peer review conducted in this quality improvement forum. The Division also participates on the Suffolk County's Traffic Safety Board .

Emergency Medical Service Community Resources/Partnerships

The Division of EMS partners with multiple groups on improving system coordination, quality of the EMS education and coordination of emergency services during natural or man-made incidents or incidents that threaten our homeland security.

- Suffolk County Department of Fire Rescue and Emergency Services
- Suffolk County Office of Emergency Management
- Suffolk County Terrorism Response Task Force (TRTF)
- Local Emergency Planning Commission (LEPC)
- Emergency Preparedness Council

EMS System/Quality Improvement Partnerships

- Regional Emergency Medical Services Council (REMSCO)
- Fire Rescue and Emergency Services Commission
- Suffolk Fire Chiefs Council
- Suffolk Fire District Officers Association
- Ambulance Chiefs Association
- District 7 of the New York State Volunteer Ambulance and Rescue Association
- Southampton Town EMS Advisory Committee
- Easthampton Ambulance Association
- North Fork Rescue Association
- Suffolk Ambulance Chiefs Association
- Regional Hospitals
- Regional Emergency Medical Advisory Committee (REMAC)
- The Regional Trauma Advisory Committee (RTAC)

The Division interacts routinely with REMSCO, Regional EMS faculty and Suffolk County EMS Instructors Association to improve quality of EMS education, through presentation of instructor updates and class audits as well as other educational seminars. The Regional Faculty participates in a **mentoring program for new Certified Instructor Coordinators**. The Division collaborates with the American Heart Association on specialty training such as stroke education, and the expansion of Public Access Defibrillation programs.

The 911 Commission is a Suffolk County body with representation from each of the twelve Public Safety Answering Points in Suffolk County. This group has participated in data collection for assessment of location of sudden cardiac deaths in the region as part of planning Public Access

Defibrillation programs, and assessment of high frequency users of EMS Services. This is a crucial group as the region addresses coordination of resources for EMS care.

Resources for Future Mobilization

- Emergency Medical Services is uniquely suited to collaborate in injury prevention strategies with community groups due to the constant interface of large numbers of the public and the community based volunteer departments. Prior efforts have been successful in disseminating large numbers of informational brochures and placards on drowning prevention and accessing 911 for EMS services. Efforts to be explored include collaboration with the Office For The Aging and other Health Services Divisions on a program for elderly fall prevention that will involve EMS agencies willing to participate.

- In 2013, efforts began to promote the concepts of "Community Paramedicine." This strategy emanates from current Medicaid reform and bundling reimbursement for health care services. EMS Providers are in a good position to evaluate living conditions, reduce hazards, and provide non-emergency medical oversight to a subset of vulnerable populations. As the concept of "Community Paramedicine" gains national attention, the Division is support the role of EMS providers in prevention strategies.

- In 2013, the Division received a National Association of Cities and Counties Health Officials (NACCHO) capacity-building grant to develop educational curricula and public service announcements promoting disaster family planning for older community-dwelling adults. This program will provide outreach to an at-risk population, and is linked to the Vulnerable Populations Registry, managed by the county's Office of Emergency Management. Collectively, efforts are made to identify, inform, empower, and protect our older citizens.

- The **Traffic Advisory Board**, where there is opportunity for partnership, as well as the **Regional Trauma Advisory Committee**. The Regional Trauma Advisory Committee has expressed interest in pursuing injury prevention strategies in collaboration with the Division of EMS, as has REMSCO. Data is currently being evaluated by the RTAC for the 15 to 24 year old age group. These injury prevention strategies are a priority for the EMS program.

Emergency Preparedness

The SCDHS is fully integrated with the county's Office of Emergency Management, and is a key stakeholder in the County's Comprehensive All-Hazards Emergency Response Plan, with responsibilities across a wide spectrum of public health and environmental concerns. Suffolk County is compliant with federal requirements for operating in the national Incident Management System (NIMS) during emergency operations. This includes practicing Unified Command, with the County Executive, through the assistance of the Commissioners (or his/her designees) from the Department of Fire, Rescue, and Emergency Services (FRES), Suffolk County Police Department and the Suffolk County Department of Health Services establish the overall policy direction that the County EOC is to follow. This group makes major policy decisions (e.g. emergency orders, public advisories, and level of response) on critical response issues.

Suffolk County Department of Public Works (DPW), manages 20 wastewater treatment facilities throughout the County, facilitates monitoring of public and private wastewater treatment facilities to ensure that public health and environmental standards are met.

The **Suffolk County Water Authority (SCWA)** facilitates monitoring of water treatment facilities to ensure that water being supplied for human consumption in the aftermath of a major incident meets State standards.

The SCDHS provides assistance to **Suffolk County FRES (Fire Rescue and Emergency Service)** and the **American Red Cross (ARC)** in managing Special Needs Shelters (SpN) to serve evacuees who require ongoing medical attention due to age or a chronic or temporary physical condition, and deploying members of the Medical Reserve Corps (MRC).

The Department of Health Service **Public Health Emergency Response Plan (PHEP),** was most recently updated in 2012. The purpose of this plan is to reach the people of Suffolk County with either preventive medications and/or medical countermeasures, depending on the demands of an incident. This includes prophylaxis with antibiotics, or treatment with antivirals, vaccinations, or chelating agents in the event of a naturally occurring or man-made public health emergency. These would include, but are not limited to: pandemic influenza; or the clandestine release of a biological agent such as anthrax, smallpox, botulinum toxin, or tularemia. The Department also maintains an active Radiation Emergency Response posture, addressing events such as a "dirty bomb" or "improvised nuclear device" (IND) scenario.

The Department of Health Services partners with the NY State Department of Health to manage the **Strategic National Stockpile (SNS),** at the downstate Regional Receiving Site (RRS), located

in Suffolk County. The SNS program is a federally funded asset, consisting of a robust supply of durable and disposable medical supplies, equipment, and pharmaceuticals, designed to provide support to an area when medical surge is such that local resources have been depleted.

The Department of Health Services coordinates the Emergency Support Function 8 Health & Medical Branch of the county's **Emergency Operations Center (EOC).** The ESF 8 Group meets regularly and includes emergency managers of local hospitals, public health staff, mental health, medical examiner, police, Fire and Rescue, State Health Department, Nassau/Suffolk Hospital Council, End Stage Renal Disease (ESRD) Consortium, American Red Cross, and others in the helping professions. The branch comes together during mitigation, planning, response and recovery phases of emergency management. The purpose of the Center is to coordinate emergency responses among Suffolk County hospitals, Nassau County hospitals, the County Emergency Operations Center, Emergency Management Services, and the Department of FRES.

SECTION FOUR-Process & Methods

A. PROCESS & METHODS

The Suffolk County Department of Health Services (SCDHS) convened a work group to prepare the Community Health Assessment (CHA). First the work group met and reviewed the process that the Department would use to complete the CHA/CHIP. The Department's representatives met with the Nassau Suffolk Hospital Council (NHSC) to develop a workgroup of community partners. In addition, each Division of the SCDHS provided a list of the agencies with which collaboration occurs on a routine basis. A decision was made for NSHC to combine the efforts of collaboration with Nassau and Suffolk Counties, given that many community agencies provide services in both counties. In addition, some of the hospital systems span both counties.

Each division of the SCDHS was tasked with describing the health issues related to its program, utilizing community resources. Information was sought from community agencies and partners in this endeavor through surveys of both community agencies and individuals within the community.

Minutes

Below are minutes from the first meeting of the SCDHS work group as well as copies of the survey instruments developed for this process.

Suffolk County Department of Health Services
CHA/CHIP Steering Committee
Friday, February 22, 2013
Meeting minutes

In attendance: Dr. James Tomarken, Lori Benincasa, Margaret Bermel, Dr. Jane Corrarino, Jennifer Culp, Dr. Linda Mermelstein, Barry Paul, Dr. Gregson Pigott

The meeting commenced at 9:15 a.m. The purpose was explained to the group, and a schematic of the CHA/CHIP process was reviewed with everyone present. Discussion was held, and a decision to move forward with the process. The CHA/CHIP are due 11/15/2013.

The process will involve input and collaboration from SCDHS Divisions and programs, community partners, and hospital partners. Sections of the CHA will be distributed through Steering Committee members to the appropriate Departmental Divisions for completion.

Drs. Tomarken and Corrarino are meeting today with a collaborative group of hospital partners and the Nassau/Suffolk Hospital Council, in order to review and finalize a community survey. Input also includes academic

public health experts from both Stony Brook University and St. Joseph's College. The draft of the survey was distributed to those present, who provided input and suggestions.

Dr. Corrarino will send out a listing of community partners and organizations for updating by the group, and asked that this be returned within several days' time in order to facilitate the ability to move the survey into the community.

Ms. Benincasa brought forward an opportunity for partners to obtain training from NYSDOH regarding diabetes prevention. Drs. Tomarken and Corrarino will bring this to the hospital partners today, and ask that they call Ms. Benincasa for additional information and coordination of this effort.

The meeting adjourned at 10:30. Next meeting date to be announced.

Respectfully Submitted,

Jane Corrarino

Dr. Jane Corrarino

Survey

Two surveys were finalized for use. One survey sought input from community-based organizations and agencies, while the other survey obtained input from individuals. The content in each survey was identical.

HEALTH SURVEY FOR ORGANIZATIONS AND AGENCIES

The Suffolk County Dept. of Health, local hospitals, and other community partners are in the process of deciding which health problems we will focus on for the next few years. We would like to find out **what problems are vital to the persons and community you provide care to**. We will use these results, along with other information, to plan to improve the health of persons in Suffolk County. Please give us your input by filling this out and sending it back. The return information is listed at the end of this survey. Thank you.

1. What are the biggest health problems for the people/community you serve? (Please check up to 5)

- ☐ Access to vaccinations
- ☐ Asthma/lung disease
- ☐ Cancer
- ☐ Care for the elderly
- ☐ Child health & wellness
- ☐ Memory loss
- ☐ Diabetes
- ☐ Drugs & alcohol abuse
- ☐ Environmental problems (water, pollution, air, etc.)
- ☐ Falls in the elderly
- ☐ Heart disease & stroke
- ☐ HIV/AIDS & Sexually Transmitted Diseases (STDs)
- ☐ Infections
- ☐ Preventable Injuries
  - ☐ Car crashes
  - ☐ Pedestrian injuries
  - ☐ Other: _____
- ☐ Mental health (including depression & suicide)
- ☐ Nutrition / eating habits
- ☐ Obesity/weight loss issues
- ☐ Premature births
- ☐ Smoking/Tobacco use
- ☐ Teen pregnancy
- ☐ Violence
  - ☐ In the home or between partners
  - ☐ Guns
  - ☐ Murders
  - ☐ Rape
  - ☐ Other: _____
- ☐ Women's health & wellness
- ☐ Other: _____

2. What would be most helpful to improve the health problems of the people/community you serve? (Please check up to 5)

- ☐ Access to healthier food
- ☐ Affordable housing
- ☐ Better schools
- ☐ Breastfeeding
- ☐ Clean air & water
- ☐ Drug & alcohol services
- ☐ More grocery stores
- ☐ Farmers markets
- ☐ Health education programs
- ☐ Health screenings
- ☐ Home care options
- ☐ Insurance enrollment programs
- ☐ Job opportunities
- ☐ Mental health services
- ☐ Parks and recreation
- ☐ Safer childcare options
- ☐ Safer places to walk/play
- ☐ Safer work place
- ☐ Transportation
- ☐ Weight loss programs
- ☐ Other (please specify) _____

3. Do any people/communities in Suffolk have problems getting needed health care?

☐ Yes (if 'yes', please answer question #4) ☐ No

4. If you answered 'yes' to question #3, what do you think the reasons are? (Please check up to 5)

- ☐ Cultural/religious beliefs
- ☐ Don't know how to find doctors
- ☐ Don't understand need to see a doctor
- ☐ Fear (e.g. not ready to face/discuss health problem)
- ☐ Lack of availability of doctors
- ☐ Language barriers
- ☐ No insurance and unable to pay for the care
- ☐ Transportation
- ☐ Unable to pay co-pays/deductibles
- ☐ Other (please specify) _____

5. What types of health screenings and/or services are needed to keep people healthy in the community you provide care to? (Check up to 5)

- ☐ Blood pressure
- ☐ Cancer
- ☐ Cholesterol (fats in the blood)
- ☐ Dental screenings
- ☐ Diabetes
- ☐ Disease outbreak prevention
- ☐ Drug and alcohol
- ☐ Eating disorders
- ☐ Emergency preparedness
- ☐ Exercise/physical activity
- ☐ Falls prevention in the elderly
- ☐ Heart disease
- ☐ HIV/AIDS & STDs
- ☐ Routine well checkups
- ☐ Memory loss
- ☐ Mental health/depression
- ☐ Nutrition
- ☐ Prenatal care
- ☐ Quitting smoking
- ☐ Suicide prevention
- ☐ Vaccination/immunizations
- ☐ Weight loss help
- ☐ Other (please specify) _____

6. What health issues do the people/community you provide care need education about? (Please check up to 5)

- ☐ Blood pressure
- ☐ Cancer
- ☐ Cholesterol
- ☐ Dental screenings
- ☐ Diabetes
- ☐ Disease outbreak prevention
- ☐ Drug and alcohol
- ☐ Eating disorders
- ☐ Emergency preparedness
- ☐ Exercise/physical activity
- ☐ Falls prevention in the elderly
- ☐ Heart disease
- ☐ HIV/AIDS & STDs
- ☐ Routine well checkups
- ☐ Mental health/depression
- ☐ Nutrition
- ☐ Prenatal care
- ☐ Suicide prevention
- ☐ Vaccination/immunizations
- ☐ Quit smoking
- ☐ Other (please specify)

7. Where do the people/community you provide care to get most of their health information? (Check all that apply)

- ☐ Doctor/health care provider
- ☐ Facebook or twitter
- ☐ Family or friends
- ☐ Health Department
- ☐ Hospital
- ☐ Internet
- ☐ Library
- ☐ Newspaper/magazines
- ☐ Other social media
- ☐ Radio
- ☐ Church group
- ☐ School or college
- ☐ TV
- ☐ Worksite
- ☐ Other (please specify) _____

8. What do you think makes a community healthy? _____

9. How would you rate the health of the people/community you provide care to?

☐ Very healthy ☐ Healthy ☐ Somewhat healthy ☐ Unhealthy ☐ Very unhealthy

If you are filling this out for an organization, what type(s) of group(s) do you provide services to?

_____

If you are able, please complete the following:

Your organization: _____

Where did you receive this survey: _____

What is your sex: ☐ Male ☐ Female

How old are you? : _____

ZIP code or Town where you work: _____

Are you Hispanic or Latino? ☐ Yes ☐ No

What race do you consider yourself?

- ☐ White
- ☐ Black/African American
- ☐ Asian/Pacific Islander
- ☐ Native American
- ☐ Other (please specify) _____

What is the highest grade you finished?

- ☐ 8th grade or less
- ☐ Some high school
- ☐ High school graduate
- ☐ Technical school
- ☐ Some college
- ☐ College graduate
- ☐ Graduate school
- ☐ Doctorate
- ☐ Other (please specify) _____

Your name: _____

Phone #: _____ Your email address: _____

Can we contact you so you can tell us more of your ideas regarding health problems in Suffolk and what should be done about them?

☐ Yes ☐ No

Thank you.

HEALTH SURVEY FOR INDIVIDUALS

The Suffolk County Dept. of Health, local hospitals, and other community partners are in the process of deciding which health problems we will focus on for the next few years. We would like to find out **what problems are important to you**. We will use these results, along with other information, to develop a plan to improve the health of persons in Suffolk County. Please give us your feedback by filling out this survey and sending it back to us. The return information is listed at the end of this survey. Thank you.

1. What health problems are you concerned about for yourself? (Please check up to 5)

- ☐ Access to vaccinations
- ☐ Asthma/lung disease
- ☐ Cancer
- ☐ Care for the elderly
- ☐ Child health & wellness
- ☐ Memory loss
- ☐ Diabetes
- ☐ Drugs & alcohol abuse
- ☐ Environmental problems (water, pollution, air, etc.)
- ☐ Falls in the elderly
- ☐ Heart disease & stroke
- ☐ HIV/AIDS & Sexually Transmitted Diseases (STDs)
- ☐ Infections
- ☐ Preventable Injuries
  - ☐ Car crashes
  - ☐ Pedestrian injuries
  - ☐ Other: _____
- ☐ Mental health (including depression & suicide)
- ☐ Nutrition / eating habits
- ☐ Obesity/weight loss issues
- ☐ Premature births
- ☐ Smoking/Tobacco use
- ☐ Teen pregnancy
- ☐ Violence
  - ☐ In the home or between partners
  - ☐ Guns
  - ☐ Murders
  - ☐ Rape
  - ☐ Other: _____
- ☐ Women's health & wellness
- ☐ Other: _____

2. Which is most needed to improve the health problems where you live? (Please check up to 5)

- ☐ Access to healthier food
- ☐ Affordable housing
- ☐ Better schools
- ☐ Breastfeeding
- ☐ Clean air & water
- ☐ Drug & alcohol services
- ☐ More grocery stores
- ☐ Farmers markets
- ☐ Health education programs
- ☐ Health screenings
- ☐ Home care options
- ☐ Insurance enrollment programs
- ☐ Job opportunities
- ☐ Mental health services
- ☐ Parks and recreation
- ☐ Safer childcare options
- ☐ Safer places to walk/play
- ☐ Safer work place
- ☐ Transportation
- ☐ Weight loss programs
- ☐ Other (please specify) _____

3. Do you or others you know in Suffolk have problems getting needed health care?

☐ Yes (if 'yes', please answer question #4) ☐ No

4. If you answered 'yes' to question #3, what do you think the reasons are? (Please check up to 5)

- ☐ Cultural/religious beliefs
- ☐ Don't know how to find doctors
- ☐ Don't understand need to see a doctor
- ☐ Fear (e.g. not ready to face/discuss health problem)
- ☐ Lack of availability of doctors
- ☐ Language barriers
- ☐ No insurance and unable to pay for the care
- ☐ Transportation
- ☐ Unable to pay co-pays/deductibles
- ☐ Other (please specify) _____

5. What types of health screenings and/or services are needed to keep <u>your community</u> (where you live) healthy? (Check up to 5)

- ☐ Blood pressure
- ☐ Cancer
- ☐ Cholesterol (fats in the blood)
- ☐ Dental screenings
- ☐ Diabetes
- ☐ Disease outbreak prevention
- ☐ Drug and alcohol
- ☐ Eating disorders
- ☐ Emergency preparedness
- ☐ Exercise/physical activity
- ☐ Falls prevention in the elderly
- ☐ Heart disease
- ☐ HIV/AIDS & STDs
- ☐ Routine well checkups
- ☐ Memory loss
- ☐ Mental health/depression
- ☐ Nutrition
- ☐ Prenatal care
- ☐ Quitting smoking
- ☐ Suicide prevention
- ☐ Vaccination/immunizations
- ☐ Weight loss help
- ☐ Other (please specify) _____

6. What health issue(s) would you like more education about? (Please check up to 5)

- ☐ Blood pressure
- ☐ Cancer
- ☐ Cholesterol
- ☐ Dental screenings
- ☐ Diabetes
- ☐ Disease outbreak prevention
- ☐ Drug and alcohol
- ☐ Eating disorders
- ☐ Emergency preparedness
- ☐ Exercise/physical activity
- ☐ Falls prevention in the elderly
- ☐ Heart disease
- ☐ HIV/AIDS & STDs
- ☐ Routine well checkups
- ☐ Mental health/depression
- ☐ Nutrition
- ☐ Prenatal care
- ☐ Suicide prevention
- ☐ Vaccination/immunizations
- ☐ Quit smoking
- ☐ Other (please specify) _____

7. Where do you and your family get most of your health information? (Check all that apply)

- ☐ Doctor/health care provider
- ☐ Facebook or twitter
- ☐ Family or friends
- ☐ Health Department
- ☐ Hospital
- ☐ Internet
- ☐ Library
- ☐ Newspaper/magazines
- ☐ Other social media
- ☐ Radio
- ☐ Church group
- ☐ School or college
- ☐ TV
- ☐ Worksite
- ☐ Other (please specify) _____

8. What do you think makes a community a healthy one? _____

9. How do you rate the health of the community where you live?

☐ Very healthy ☐ Healthy ☐ Somewhat healthy ☐ Somewhat unhealthy ☐ Unhealthy ☐ Very unhealthy

If you are able, please fill out this section:

Where did you receive this survey: _____ How old are you? : _____

What is your sex: ☐ Male ☐ Female ZIP code or Town where you live: _____

What race do you consider yourself?

- ☐ White
- ☐ Black/African American
- ☐ Asian/Pacific Islander
- ☐ Native American
- ☐ Other (please specify) _____

Are you Hispanic or Latino? ☐ Yes ☐ No

What is the highest grade you finished?

- ☐ 8th grade or less
- ☐ Some high school
- ☐ High school graduate
- ☐ Technical school
- ☐ Some college
- ☐ College graduate
- ☐ Graduate school
- ☐ Doctorate
- ☐ Other (please specify) _____

Do you have health insurance?

☐ Yes ☐ No ☐ Not now, but I did in the past

Can we contact you so you can tell us more of your ideas regarding health problems in Suffolk and what should be done about them?

☐ Yes ☐ No

If you answered yes to this question, what is your name: _____

Phone #: _____ Your email address: _____

Thank you.

RL 6.2

Community Partnership

The SCDHS collaborated with the Nassau-Suffolk Hospital Council (NSHC) in administering the survey. SCDHS handed out the individual surveys in-person at various health fairs and other health contexts. The community-based organization survey was sent out by the Nassau-Suffolk Hospital Council online via *SurveyMonkey*. Results of the surveys were used to address both the CHA and the CHIP.

The group of partners includes representatives from:

- Adelphi University
- Asthma Coalition of Long Island
- Brookhaven Memorial Hospital Medical Center
- Catholic Health Services of Long Island
- Cornell Cooperative Extension of Suffolk County
- Eastern Long Island Hospital
- Good Samaritan Hospital
- Long Beach Medical Center
- Nassau County Department of Health
- North Shore-LIJ Health System
- Peconic Bay Medical Center
- South Nassau Communities Hospital
- Southampton Hospital
- St. Charles Hospital
- St. Joseph's College
- Stony Brook University Hospital
- Suffolk County Department of Health Services
- SUNY Stony Brook
- Western Suffolk BOCES
- Winthrop University Hospital
- YMCA of Long Island

Survey results are described further in the SCDHS Community Health Improvement Plan,

B. BIBLIOGRAPHY

1. U.S. Census. "American Community Survey 2011." U.S. Census 2010 Web. Accessed October 18, 2013
   Sections: Demographics, Preventive Medicine, Mental Health
2. New York State Department of Health. "New York State Community Health indicator Reports." NYSDOH Web., Accessed October 18, 2013: <http://www.health.ny.gov/statistics/chac/indicators/>.
   Demographics
   Injury < http://www.health.ny.gov/statistics/chac/mortality/d28.htm>
   <http://www.health.ny.gov/statistics/chac/hospital/h32.htm>
   Obesity < http://www.health.ny.gov/statistics/chac/indicators/obs.htm>
3. CMS. Administrative Claims Data, Chronic Conditions Data Warehouse. Jan 2007-Dec2011 <https://www.ccwdata.org/web/guest/home>.
4. New York State Department of Health. "New York State Expanded Behavioral Risk Factor Surveillance System." (BRFSS), Suffolk County Final Report July 2008 - June 2009. December 2009. New York State Department of Health.
   Sections: Prevention, Chronic Disease, Cancer, Socioeconomic Risk Factors
5. U.S. Preventative Task Force. "The Guide to Clinical Preventive Services 2006: Recommendations of the U.S. Preventive Services Task Force" (USPSTF). Agency for Healthcare Research and Quality. Lippincott Williams & Wilkins, December 15, 2006.
6. New York State Department of Health. "Expanded Behavioral Risk Factor Surveillance System 2013-2014 Preliminary (4-month) Data Report: Suffolk County." NYSDOH
7. New York State Department of Health. "Vital Statistics." NYSDOH Web. Accessed October 18, 2013: <http://www.health.ny.gov/statistics/vital_statistics/2011/ >
   Primary and Preventive Health Care
   Family Planning:
   Prenatal
   Child Health: Asthma, 2008-2010
   Injury Prevention, 2008-2010, Feb 2012, May 2011
   Chronic Disease, Sept/Feb 2012, May 2013
8. Danaei, Ding, Mozaffarian, Taylor, Rehm. "The Preventable Causes of Death in the United States: Comparative Risk Assessment of Dietary, Lifestyle, and Metabolic Risk Factors." Plosmedicine Web, April 28, 2009. Accessed October 18, 2013:
   <http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1000058>
9. New York Department of Health. "Description of Population Demographics and General Health Status New York State, 2012." NYSDOH Web. Accessed October 18, 2013.
   <http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/docs/general_description.pdf>
10. New York State Department of Health. "Prevention Agenda 2013-2017: New York State's Health Improvement Plan." NYSDOH Web. Accessed October 18, 2013
    Family Planning
    <https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/p57.htm>
    <https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/p55.htm>
    <https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/p56.htm>
    <https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/p58.htm>
    <https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/p59.htm>
    <http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/suffolk.htm>
    Smoking <http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/indicators/2013/suffolk.htm>
11. Ahlers & Associates. New York State Family Planning Data System. (3/05/13).Table AL-1 Family Planning Performance Measures.< https://secure.ahlerssoftware.com/AhlersReports.aspx>.
12. New York State Department of Health. "Suffolk County Infant Deaths by Race 2007-2011." NYSDOH, unpublished bio-info@health.state.ny.us.
13. U.S. Department of Health and Human Services. "Healthy People 2020." HHS Web. Accessed October 18, 2013: <http://www.healthypeople.gov/2020/default.aspx>

Chronic Disease <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicId=21>
<http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=21>

14. March of Dimes. "Peristats." March of Dimes Web, 2006-2009,2011,2013.
15. Sudden Infant and Child Death (SICD) Resource Center 2013
16. Center for Disease Control and Prevention. "Pregnancy Risk Assessment Monitoring System." (PRAMS). CDC Web. <http://www.cdc.gov/prams/>
17. Children's Defense Fund Web. Accessed 10/21/2013.<http://www.childrensdefense.org/policy-priorities/childrens-health/uninsured-children/>
18. New York State Department of Health. "Quality and Patient Safety Data."
19. New York State Department of Health. "Prevention Agenda Toward the Healthiest State Progress Report 2012." NYSDOH Web. Accessed October 18, 2013. <http://www.health.ny.gov/prevention/prevention_agenda/2013-2017/docs/challenges.pdf>
20. Centers for Disease Control and Prevention. "Preventing Lead Poisoning in Young Children." CDC Web, Atlanta 2005. Accessed October 16, 2013. <http://www.cdc.gov/nceh/lead/publications/PrevLeadPoisoning.pdf>
21. New York State Department of Health. "Managed Care Reports: Child Preventive Care." NYSDOH Web, revised Nov 2012. Accessed October 18, 2013. <http://www.health.ny.gov/health_care/managed_care/reports/eqarr/2012/long_island/child_health_plus/child_preventive_care.htm,>
22. New York State Department of Health. "Reducing Lead Exposure in Children: Lead Testing and Lead Poisoning Among New York State Children 2009 Report."
23. Barker et al. "Changes in Caries in Primary Dentition from 1988-1994 to 1999-2004 Among U.S. Children Aged 2-5 Years: A Closer Look." CDC Division of Oral Health; National Oral Health Conference We, April , 2013. Accessed October 25,2013.
24. New York State Department of Health. "Injury Prevention in New York State." NYSDOH Web, October 2012. Accessed October 18, 2013: <http://www.health.ny.gov/prevention/injury_prevention/>
<http://www.health.ny.gov/prevention/injury_prevention/falls_in_older_adults_nys.htm>
<http://www.health.ny.gov/statistics/prevention/injury_prevention/docs/2006_2008_ai_leading_death.pdf >
25. New York State Department of Health. "Statewide Planning and Research Cooperative System" (SPARCS).
26. Centers for Disease Control and Prevention. *"1991-2011 High School Youth Risk Behavior Survey Data."* CDC Web *2011.* Accessed August 12, 2013. <http://apps.nccd.cdc.gov/youthonline>
27. Center for Disease Control and Prevention. "Injury Prevention & Control: Traumatic Brain Injury." CDC Web, March 2013. Accessed October 18, 2013. <http://www.cdc.gov/traumaticbraininjury/statistics.html>
28. New York State Office of Mental Health. "Patient Characteristics Survey 2011."OMH Web. <http://bi.omh.ny.gov/pcs/index>
<http://bi.omh.ny.gov/pcs/Summary%20Reports>
29. New York State Office of Alcohol and Substance Abuse Services. 2012
30. New York State Office of Alcoholism and Substance Abuse Services. "Youth Development Survey 2010-2011."
31. The Justice Policy Institute. "Substance Abuse Treatment and Public Safety." The Justice Policy Institute Web, Washington, DC, January 2008. <http://www.justicepolicy.org/images/upload/08_01_rep_drugtx_ac-ps.pdf>
32. World Health Organization. "Chronic Diseases." WHO Web. Accessed October 18, 2013: <http://www.who.int/topics/chronic_diseases/en/>
33. New York State Department of Health Division for Chronic Disease Prevention. "Information for Action #2013-4: End Stage Renal Disease (ESRD) is Costly but Preventable." NYSDOH Web, March 2013. Accessed October 18, 2013. <http://www.health.ny.gov/statistics/prevention/injury_prevention/information_for_action/docs/2013-04_ifa_report.pdf>
34. Department of Health and Human Resources. "Million Hearts." Million Hearts HHS Web.
35. National Diabetes Fact Sheet 2011. Centers for Disease Control website, Accessed October 16, 2013. <http://www.cdc.gov/diabetes/pubs/factsheet11.htm>
36. New York State Department of Health. "Arthritis." NYSDOH Web. Accessed October 16, 2013. <http://www.health.ny.gov/diseases/conditions/arthritis/>
37. New York State Department of Health. "Asthma Information." NYSDOH Web. Accessed October 16, 2013. <http://www.health.ny.gov/statistics/ny_asthma/>
38. New York State Department of Health. "Cancer Registry." NYSDOH Website, July 2012.

<http://www.health.ny.gov/statistics/cancer/registry/>

39. American Cancer Society. "The Cancer Burden in New York State." ACS, Atlanta, July 2012.
40. Cancer Control P.L.A.N.E.T. "Five-Year Mortality Rate Changes-New York." Cancer Control Planet Web, 2013 <http://cancercontrolplanet.cancer.gov/>
41. Centers for Disease Control and Prevention. "Lung Cancer Statistics." CDC Web. Accessed July 22, 2013. <http://www.cdc.gov/cancer/lung/statistics/index.htm>
42. Centers for Disease Control and Prevention. "Colorectal Cancer Screening." CDC Web. Accessed July 22, 2013. <http://www.cdc.gov/cancer/colorectal/basic_info/screening/>
43. Centers for Disease Control and Prevention. "Breast Cancer Disparities" CDC Web. Accessed July 22, 2013. <http://www.cdc.gov/features/vitalsigns/breastcancer/>
44. Centers for Disease Control and Prevention. "Prostate Cancer." CDC Web. Accessed July 23, 2013 <http://www.cdc.gov/cancer/prostate/index.htm>
45. American Cancer Society. "Cancer Facts and Figures 2012" CDC Atlanta 2012.
46. American Cancer Society. "Liver Cancer Detailed Guide." ACS Web last updated 1/18/13. <http://www.cancer.org/cancer/livercancer/detailedguide/index>
47. American Cancer Society. "Endometrial (Uterine) Cancer Detailed Guide." ACS Web, last updated 1/18/13. <http://www.cancer.org/cancer/endometrialcancer/detailedguide/endometrial-uterine-cancer-what-is-endometrial-cancer>
48. American Cancer Society. "Cancer in Children Detailed Guide." ACS Web, last updated 1/18/13. <http://www.cancer.org/cancer/cancerinchildren/detailedguide/index>
49. Cancer Control P.L.A.N.E.T. "State Cancer Profiles." Cancer Control Planet Web. Accessed August 7, 2013: <http://statecancerprofiles.cancer.gov/>
50. American Cancer Society. "Cancer Facts & Figures for African Americans 2013-2014." ACS, Atlanta; 2013.
51. New York State Department of Health. "Suffolk County Health Indicators by Race/Ethnicity, 2008-2010." NYSDOH Web., Accessed on 7/9/13: <http://www.health.ny.gov/statistics/community/minority/county/suffolk.htm>
52. Prevention First web. <www.prevention.org>
53. New York State Department of Health. "STD Statistical Abstract. Sexually Transmitted Diseases Data and Statistics." NYSDOH Web. < http://www.health.ny.gov/statistics/diseases/communicable/std/>
54. UNAIDS website. Accessed October 16, 2013. < http://www.unaids.org/en/dataanalysis/>
55. The Henry J. Kaiser Family Foundation. "People Living with HIV/AIDS." KFF Web. Accessed October 16, 2013: <http://kff.org/hivaids/state-indicator/people-living-with-hivaids/>
56. United Way of Long Island. " HIV AIDS Grants Management." United Way of Long Island Web. Accessed October 18, 2013. < http://www.unitedwayli.org/hivaids>
57. New York State Department of Health. "New York State HIV/AIDS Surveillance Annual Report. For Cases Diagnosed Through December 2010." NYSDOH, Bureau of HIV/AIDS Epidemiology, August 2012. Accessed October 18, 2013. <http://www.health.ny.gov/diseases/aids/statistics/annual/2010/2010-12_annual_surveillance_report.pdf>
58. Centers for Disease Control and Prevention. "HIV/AIDS Surveillance Report: Cases of HIV Infection and AIDS in the Unites States and Dependent Areas, 2011. Vol 23" CDC Web. Accessed October 18, 2013. <http://www.cdc.gov/hiv/pdf/statistics_2011_HIV_Surveillance_Report_vol_23.pdf#Page=5>
59. Centers for Disease Control and Prevention. "Prevalence and Awareness of HIV Infection Among Men Who Have Sex With Men -21 Cities, United States 2008." CDC Web, Morbidity and Mortality Weekly Report: September 24, 2010 / 59(37); 1201-1207. Accessed October 18, 2013. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5937a2.htm?s_cid=mm5937a2_w>
60. New York State Department of Health. "Suffolk County HIV/AIDS Surveillance Report through December 2011." NYSDOH; Bureau of HIV/AIDS Epidemiology. Not yet published.
61. New York State Department of Health. Health Commerce Website. <https://commerce.health.state.ny.us/>
62. Imdad, Tserenountsag, Blog, Halsey, Easton, Shaw. "Religious Exemptions for Immunization and Risk of Pertussis in New York State, 2000-2011."Pediatrics, Vol. 132 No1, Jul1, 2013 pp37-43. Accessed October, 2013. <http://pediatrics.aappublications.org/content/132/1/37.full.htm>
63. Centers for Disease Control and Prevention. "Pneumococcal Disease." CDC Web. Accessed October 18, 2013. <http://www.adultvaccination.com/pneumococcal_vaccine_vaccination_adult_immunization.htm>
64. Centers for Disease Control and Prevention. "Genital HPV Infection Fact Sheet." CDC Web. Accessed October

2013. <http://www.cdc.gov/std/HPV/STDFact-HPV.htm>
65. American Cancer Society. "Cancer Prevention & Early Detection Facts & Figures 2013." ACS, Atlanta 2013.
66. New York State Department of Health. "New York Tobacco Control Program." NYSDOH Web. <http://www.health.ny.gov/prevention/tobacco_control/>
67. New York State Department of Health. "Use of Any Tobacco Products among High School Students on a Downward Trend. Tobacco Control Program." NYSDOH Web, StatShot Vol. 5, No. 3/Mar. 2012. Accessed October 18, 2013. <http://www.health.ny.gov/prevention/tobacco_control/reports/statshots/volume5/n3_use_of_tobacco_among_high_school_students.pdf>
68. Centers for Disease Control and Prevention. "Behavioral Risk Factor Surveillance System 2011: New York." CDC Web. Accessed October 18, 2013. <http://www.cdc.gov/tobacco/data_statistics/state_data/state_highlights/2012/pdfs/states/new_york.pdf>
69. Centers for Disease Control and Prevention. "Vital Signs: Smoking Among those with Mental Illness." CDC Web. Accessed October 18, 2013. <http://www.cdc.gov/media/dpk/2013/dpk-vs-adult-smoking-mental-illness.html>
70. New York State Department of Health. "Prenatal Risk Assessment Monitoring System 2011." NYSDOH Web. Accessed October 16, 2013. <http://www.health.ny.gov/statistics/prams/reports/plots/plot_smkdur.htm>
71. New York State Department of Health. "Obesity Prevention." NYSDOH Web, revised May 2011. Accessed October 18, 2013. < http://www.health.ny.gov/prevention/obesity/ >
72. Center for Disease Control and Prevention. "Pediatric Nutrition Surveillance (PedNSS) System."
73. New York State Department of Health. "Student Weight Status Data." NYSDOH Web. Accessed October 18, 2013. <http://www.health.ny.gov/prevention/obesity/statistics_and_impact/student_weight_status_data.htm>
74. New York State Pediatric Nutritional Surveillance System, July 2012.
75. New York State Expanded Behavioral Risk Factor Surveillance System (BRFSS), Overweight and Obesity. New York State Adults 2011. BRFSS Brief. Number 1304.
76. Centers for Disease Control and Prevention. "National Health and Nutrition Examination Survey, 2009-2010" CDC web. <http://www.cdc.gov/nchs/nhanes/nhanes2009-2010/nhanes09_10.htm>
77. Paraprofessional Health Care Institute (PHI). "Workforce Facts: About New York Direct-Care Workers, 2008-2010." PHI Web. Accessed October 23, 2013. <http://www.phinational.org/policy/state-activities/phi-new-york/workforce-facts>
78. Suffolk County Legislature. "A Local Law Establishing a Food Policy Council for Suffolk County." Suffolk County Legislature Web. Accessed October 23, 2013

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Community Mental Hygiene:	Art Flescher, LCSW, CASAC, AnnMarie Csorny, LCSW
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D. DATA SOURCE BY HEALTH SECTION

Section	Data Source	Year
Asthma	SCDHS Health Centers	2009-2011
	NYSDOH Asthma ED/Hospital Discharge data	2008-2010
Cancer	NYS Cancer Registry	2006-2010
	NYSDOH Suffolk County Cancer Indicators	2008-2010
	NYS Expanded Behavioral Risk Factor Surveillance System	2008-2009
Child Health	NYS Pediatric Nutritional Surveillance System	2012
	NYSDOH Vital Statistics	2008-2010
	Student Weight Status Category Reporting System	2010-2012
Chronic Disease	NYSDOH Vital Statistics	2008-2010
	NYS Expanded Behavioral Risk Factor Surveillance System	2008-2009
	SCDHS Health Centers	2011-2012
	NYSDOH Suffolk County Health Indicators	2008-2010
Communicable Disease	NYSDOH Suffolk County Communicable Disease Indicators	2008-2010
	SCDHS Communicable Disease Reports	2010-2012
Demographics	U.S. Census/American Community Survey	2012, 2009-2011 3-year estimates, 2007-2011 5-year estimates
	NYSDOH Suffolk County Health Indicators	2007-2010
	NYS Expanded Behavioral Risk Factor Surveillance System	2008-2009
	CMS administrative claims data	2007-2011
Family Planning	NYSDOH Vital Statistics	2011
	NYSDOH Suffolk County Health Indicators	2008-2010
Health Education	Eastern Suffolk BOCES	2013
	Youth Risk Behavior Surveillance System	2011
	NYSDOH Suffolk County Health Indicators	2007-2010

HIV	NYSDOH HIV/AIDS Surveillance Annual Report	2010
	Suffolk County HIV/AIDS Surveillance Report	2011
Injury Prevention	NYSDOH Suffolk County Injury Indicators	2007-2010
Mental Health	NYS Office of Mental Health Patient Characteristic Survey	2011
	NYS Office of Alcoholism and Substance Abuse Services (OASAS)	2012
	NYS OASAS Youth Development Survey	2010-2011
Nuisance	SCDHS General Sanitation	2007-2012
Nutrition	National Health and Nutrition Examination Survey	2009-2010
	CDC Pediatric Nutrition Surveillance System	2011
	SCDHS Women, Infants, and Children Program	2012
	SCDHS Supplemental Nutrition Assistance Program	2010
	SCDHS Farmers Market Nutrition Program	2012
Obesity	NYSDOH Suffolk County Obesity and Related Indicators	2008-2010
	Youth Risk Behavior Surveillance System	2011
	NYS Expanded Behavioral Risk Factor Surveillance System	2008-2009
Perinatal	U.S. Census	2010
	NYSDOH Vital Statistics	2011
	SCDHS Health Centers	2011
	SCDHS Prenatal	2012
	March of Dimes Peristats for Suffolk County	2006-2009, 2011, 2013
Primary and Preventive Health Care	NYSDOH Vital Statistics	2007-2010
	NYS Expanded Behavioral Risk Factor Surveillance System	2008-2009
	SCDHS Health Centers	2012
Public Health Nursing	NYSDOH Vital Statistics	2008-2010
	American Community Survey	2009-2011 3-year estimates
	SCDHS Bureau of Public Health Nursing	2010

Rabies	SCDHS Bureau of Public Health Protection	2002-2012
Temporary Residence	SCDHS Bureau of Public Health Protection	2002-2012
Tuberculosis	Suffolk County Tuberculosis Registry	2003-2012