2014
Community Needs Assessment

Suffolk County, New York

DELIVERY SYSTEM REFORM INCENTIVE PROGRAM (DSRIP)

Population Findings

With a Special Emphasis on Medicaid Recipients

and Uninsured Residents

Prepared by

Stony Brook Medicine

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The goals of the Delivery System Reform Incentive Payment (DSRIP) program are to transform the healthcare safety net system so as to reduce avoidable hospital and Emergency Department (ED) utilization by 25% over five years and to improve other health measures at both the system and individual levels. Along with improving population health, this will create a more cost effective Medicaid program and improve health outcomes. As a means of reaching these goals, providers have come together to form Performing Provider Systems (PPSs)—collaborations of organizations that work together to achieve DSRIP goals. Stony Brook University Hospital (SBUH) was chosen as the lead organization for Suffolk County. To date, hundreds of partners across the continuum of care have come together to form the Suffolk County PPS.

All PPSs were required to complete a Community Needs Assessment (CNA) to guide the selection and development of projects that will drive change over the five year DSRIP period. For the Suffolk PPS, the process was overseen by a SBUH-based leadership group made up of representatives across various clinical and administrative departments. This group worked in concert with PPS-wide key participants and Informants to complete a CNA intended to:

- Describe the population to be served;
- Assess their health status and clinical care needs;
- Assess the healthcare and communitywide systems, resources, and assets available to address those needs; and
- Identify the priorities that should drive DSRIP project selection.

This will ensure that DSRIP projects are based on a solid understanding of the health needs of the population and the resources available to address them. It will create the greatest opportunity for moving toward the Triple Aim over the next five years.

i.   SUMMARY OF METHODS

This CNA incorporated both primary and secondary research. The bulk of the primary research was conducted on behalf of the Suffolk PPS by Professional Research Consultants, Inc. (PRC). PRC is a nationally recognized healthcare consulting firm with extensive experience conducting community needs assessments in hundreds of communities across the United States since 1994. To understand assets, community resource inventories were compiled by Stony Brook Medicine faculty and staff.   A second consultant hired by SBUH, xG Health Solutions (the consulting arm of Geisinger Health System), also contributed essential information regarding the state of the healthcare delivery system in Suffolk County. Such information was obtained by xG through both PPS-wide surveys as well as through interviews with a sample of physicians, hospitals, clinic administrators, and care managers. The Stony Brook Medicine bioinformatics team and PRC conducted the review of secondary data sources contained herein.

PRC Population Surveys
PRC's primary research was a systematic, data-driven approach to determining the health status, behaviors and needs of residents in Suffolk County. The study area for the survey was Suffolk County, New York, and was based on zip codes comprising the County. There were two components to the survey conducted by PRC: a telephone survey of Suffolk residents and an online survey of Key Informants.

The **telephone survey** (both landline and cell-based) focused on two groups: the *Total Population* and the *Target Population*. For the Total Population, this provided information to identify community health issues of greatest concern across the overall population. Trained interviewers surveyed a random sample of 400

individuals age 18 and older in Suffolk County. For the Target Population—Medicaid members and uninsured (self-pay) residents of Suffolk County—trained interviewers surveyed a sample of 500 County residents, stratified as 100 respondents in each of the five County submarkets shown in the map below. The goal is to use this information to improve health, reduce health disparities, and to address systems of care in Suffolk County that lead to suboptimal health outcomes and unnecessary costs.
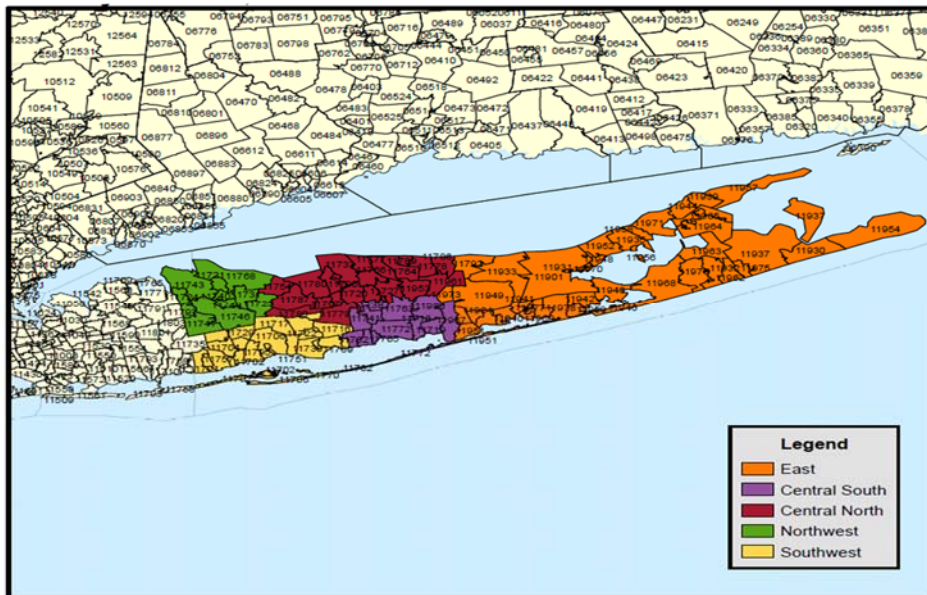
For the telephone survey, the sample was drawn from phone numbers of recent patients from area hospitals and clinics (including Stony Brook University Hospital, HRH Care, Catholic Health Services of Long Island, Peconic Bay Medical Center, and North Shore-LIJ Health System). Criteria specified that lists include Suffolk residents having inpatient or outpatient encounters based on electronic medical records (EMR) in calendar year 2013 or any ED visit in calendar year 2013; records showing self-pay, Medicaid or Medicaid Managed Care; and a date of birth between 7/1/1949 and 7/1/1996. Characteristics of the surveyed population are shown in the chart below.
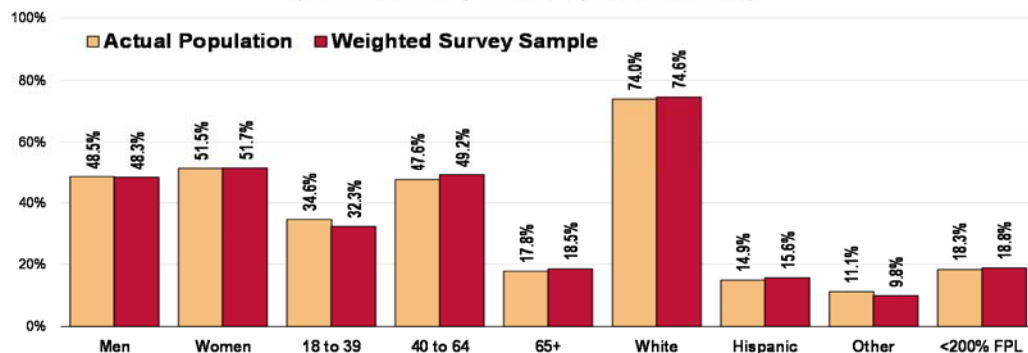
The **Online Key Informant Survey,** also completed by PRC**,** supplemented the telephone survey. This survey solicited input about the Target Population from individuals with a broad interest in community health. The

list of recommended participants was based on suggestions from PPS members and included physicians, public health representatives, other health professionals, social service providers, and a variety of community leaders and interested parties. Potential participants were chosen because of their ability to identify primary concerns of populations of interest as well as of the community overall. Final participation included 118 respondents.

Provider and Community Resource Inventories and Capacity Assessment
This information was collected from surveys, internet searches, and interviews conducted by PRC, SBUH faculty staff, and xG Health Solutions. All PPS partners and many community agencies were surveyed to get a deeper sense of their resources, capacity, and capabilities.

Provider Capability Baseline Assessment
As part of a consulting engagement, xG Health Solutions conducted a series of surveys and interviews with PPS members to assess the capabilities and gaps in the local healthcare system. Along with a general survey, they interviewed 11 hospital administrators, three clinics, and six entities with a strong care management function. Considerable focus was placed on assessing both primary care and the care management/coordination landscape to determine both the strengths and gaps in these essential functions.

Secondary Data Analysis
The bulk of the review and analysis of relevant secondary data was completed by the SB Medicine bioinformatics team. The team reviewed a wide range of public and proprietary datasets, including those provided by the NYSDOH on the DSRIP website (https://www.health.ny.gov/health_care/medicaid/redesign/delivery_system_reform_incentive_payment_program.htm) and the SPARCS Limited Dataset. In addition, PRC conducted a review of various publically available datasets to provide both a community context and a set of comparative benchmarks for their survey findings. Stony Brook Medicine planners reviewed previously published needs assessments and qualitative findings to supplement the primary and secondary analyses.

ii.   SUMMARY OF FINDINGS

Overview of Suffolk County and the Submarkets
Suffolk County occupies the easternmost portion of Long Island, in the southeastern portion of New York State. The County is surrounded by water on three sides, including the Atlantic Ocean and the Long Island Sound. While often thought of as affluent and demographically homogeneous, Suffolk County is becoming increasingly diverse with greater income inequality than ever before. There exist a number of well recognized areas that are vulnerable and underserved from the standpoint of health status and access to regional assets. Based on local data collected and analyzed as part of this assessment, the same disadvantaged communities tend to repeatedly emerge as having the populations that suffer from the greatest distress.

Suffolk County performs well on many health measures. Out of 62 New York counties, Suffolk ranks 15th in overall health outcomes and 8th in health factors.[1] Health *outcomes* represent how healthy a County is while health *factors* represent the influences on the health of the County. This suggests that substantial improvements are possible if the systemic and population factors that preclude optimal health can be addressed. With a population of almost 1.5 million, the County performs favorably in relation to NYS as a whole on measures such as overall age-adjusted mortality, infant mortality, child mortality, food insecurity, health insurance rate, household income, and the homicide rate. Areas of poor performance include mortality rates related to motor vehicle accidents and other unintentional injuries, drug poisoning deaths, primary care

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[1] University of Wisconsin Population Health Institute. County Health Rankings 2014.

availability, and the cost of care.[2] Suffolk County also has high rates of many chronic diseases, and in relation to prevention, a majority of local communities have chosen chronic disease as their highest priority.[3]

Suffolk County has approximately 240,000 Medicaid members (199,389 regular and 39,967 dual) and an uninsured population approaching 150,000 (about 10%).[4] Medicaid members collectively had 34,944 hospital discharges in 2012.[5] In regard to ED usage, Medicaid members had 119,932 total visits, of which 72% (86,435) were potentially avoidable.[6] Based on primary diagnoses, the main driver of inpatient admission in the Medicaid population was the need for perinatal care, followed by psychiatric disorders, cardiovascular disease (CVD), and substance abuse disorders. Cancer, diabetes and asthma also contributed high numbers of admissions.[7]

In regard to measures of unnecessary utilization such as Prevention Quality Indicators (PQI) and Potentially Preventable Emergency Department Visits (PPV) among Medicaid members, Suffolk County performs unfavorably on many indicators. Out of 25 reported PQI rates including composites, Suffolk exceeds the statewide average on 17, and falls below the statewide average on only eight.[8] In relation to PPVs, Suffolk County performs barely better than the statewide rate and exceeds the rate for Nassau County considerably.[9] When combining relevant categories, the greatest number of PQI admissions is in relation to chronic respiratory disease, followed by diabetes and cardiovascular disease.[10] In terms of Potentially Preventable Readmissions (PPR), a high degree of variation exists between County hospitals and about one-third have rates above the statewide average, indicating a lack of coordinated transitional care.[11]

While the uninsured were an integral part of the Target Population for all our primary research, the secondary data that we have to describe the utilization of health services by this population is less detailed than for Medicaid members. We know that uninsured Suffolk County residents had 5,060 hospital discharges[12] and 87,127 ED visits in 2012 at Suffolk hospitals (excluding Mather Hospital which does not code insurance data in the SPARCS dataset).[13] Many of the uninsured receive outpatient care at the Suffolk County Department of Health Services clinics and FQHCs run by Hudson River Healthcare, where the patient population is approximately 35% uninsured.

As noted earlier, the Population Survey conducted by PRC divided the County into five submarkets or subareas (the Southwest, the Northwest, the Central North, the Central South and the East) that define not only geography but also general health service utilization patterns. Each area has pockets of particularly high need, and these areas emerge as points of focus in relation to Medicaid and uninsured populations. However, out of

[2] University of Wisconsin Population Health Institute. County Health Rankings 2014.

[3] https://www.health.ny.gov/prevention/prevention_agenda/2013-2017/

[4] New York State Department of Health [DOH]. (2014, May). Medicaid Beneficiaries, Inpatient Admissions and Emergency Room visits by ZIP Code: Beginning 2012.

[5] New York State Department of Health [DOH]. (2014, May). Medicaid Beneficiaries, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Beneficiaries-Inpatient-Admissions-and-Em/m2wt-pje4

[6] Ibid

[7] Ibid

[8] Office of Quality and Patient Safety, 2014 Created by Office of Health Systems Management, NYSDOH
https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/performance_data/docs/chartbook1_avoidable_hospitalization_long_island.pdf

[9] Ibid

[10] New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn
New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

[11] New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011 . Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn

[12] New York State Department of Health [DOH]. (2014,April). Hospital Inpatient Discharges (SPARCS Limited Dataset): 2012

[13] New York State Department of Health. (2014, April) Hospital Outpatient Discharges (SPARCS Limited Dataset): 2012

numerous population health indicators on which the Total and Target Populations were compared, the Target Population fared significantly worse in all but a handful of clinical conditions.

- The **Southwest** has the largest population of any submarket, with 461,901 residents.[14] Though the average household income is generally high, approximately 23% of residents (106,237) are recipients of Medicaid[15] and an estimated 13% (60,508) are uninsured.[16] Several areas of particularly high need exist. The Brentwood/Bay Shore/Central Islip area is a group of contiguous zip codes in the northern portion of the submarket. Along with having one of the highest Medicaid and uninsured concentrations, this area also has a high Spanish speaking population and one of the lowest educational levels. Transportation has been noted by Key Informants to be a pressing problem.

  The Brentwood/Bay Shore/Central Islip area consistently appears as having some of the highest numbers of hospitalizations and prevalence rates for chronic conditions, though risk-adjusted PQI rates by zip code are not as high as in certain other areas. When comparing all of the submarkets, this area had the greatest number of respondents who reported that their physical health was "fair/poor"; the greatest difficulty accessing healthcare; the highest rates of diabetes and obesity; and the highest rates of kidney disease.[17] This submarket also has three communities (Brentwood, Wyandanch, and Central Islip) where the uninsured rate exceeds 20%.[18]

- The semi-rural **East** has an overall population of 205,249 residents.[19] Approximately 16% are Medicaid recipients[20] (32,840) and an estimated 13% (25,820) are uninsured.[21] The Riverhead/Hampton Bays area reflects a particularly high level of need and has a large elderly population. Riverhead has seen substantial growth in the Hispanic population over the past ten years. Due to its relative geographic isolation, patients must often travel up to 2-3 hours to receive care. This isolation is believed to drive the high level of substance abuse problems. The area also has a substantial seasonal migrant farm worker population, many of whom are undocumented.   Hampton Bays has the highest concentration of children (0-17 yrs.) below the Federal Poverty Line and a substantial Native American population with unique care needs. The Riverhead/Hampton Bays area is a hotspot for Medicaid admissions related to many chronic diseases. The East also contains one of the two federally designated Medically Underserved Areas/Places in the County—Riverhead census tracts 1698.00 and 1699.01-.02.

  When comparing all of the submarkets, the East had the highest percentage of respondents who are uninsured, with at least six communities in which the uninsured population rate exceeds 20%.[22] In comparison to the other submarkets, members of the Target Population in the East see "cost" as a barrier to accessing physician visits more frequently and report the greatest difficulty with transportation. Preventive care is particularly unfavorable on a number of measures, including the percentage having recent cholesterol checks, nutrition counseling, and medical advice on weight.[23]

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[14] Truven Health Analytics Inc. 2014 Population Planning (Demographics - Population by age band, gender, and race)
[15] Medicaid Members Data from DSRIP 2012; Uninsured data from ACS 2012 5 Year Estimate
[16] American Community Survey [US Census] (September 2014). 2012 American Community Survey 5-Year Estimates of Insurance Coverage, Table DP03; using American FactFinder; extracted from: http://factfinder2.census.gov
[17] PRC Population Survey
[18] American Community Survey 2012; five-year estimates; Newsday
[19] Truven Health Analytics Inc. 2014 Population Planning (Demographics - Population by age band, gender, and race)
[20] Medicaid Members Data from DSRIP 2012; Uninsured data from ACS 2012 5 Year Estimate
[21] American Community Survey [US Census] (September 2014). 2012 American Community Survey 5-Year Estimates of Insurance Coverage, Table DP03; using American FactFinder; extracted from: http://factfinder2.census.gov

[22] Eichberg, S. (2014). Vital Signs 2014—Measuring Long Island's Social Health. Garden City, New York: Adelphi University
[23] PRC Population Survey

- The **Northwest** has an overall population of 229,415.[24] Approximately 10% are Medicaid recipients[25] (22,942) and 7% (15,797) are uninsured.[26] The average household income is the third highest of the five subareas. One particular hotspot in relation to healthcare needs and unnecessary utilization in the Target Population is Huntington Station, a multi-cultural African-American, Hispanic, and white community that is less prosperous than Suffolk County in general. In relation to the other submarkets, the Target Population in the Northwest reported the highest number of annual ED visits; the greatest prevalence of cancer (equal to the Central South), back pain, and hearing trouble; the highest rates of domestic violence and fair/poor mental health; and poor nutritional status. Areas within the Northwest show PQI rates that are particularly high related to adult acute conditions (PQI 91), adult angina without procedure (PQI 13), and adult diabetes (PQIs 1, 3 and 16).

- The **Central South** has a total population of 207,379[27] approximately 16% of whom are Medicaid recipients[28] (33,181) and 10% (20,902) are uninsured.[29] The average household income in the Central South is the lowest of any of the submarkets.[30] One particular hotspot within this region is Patchogue, which has the highest concentration within the Total Population living below the Federal Poverty Line of any community in Suffolk County. There is a high Hispanic population and the area has limited public transportation with particularly restricted hours on weekends.

  The Central South contains one of the two federally designated Medically Underserved Areas/Places in the County—the North Bellport census tract 1591.03. In comparison to the other submarkets, the Target Population survey respondents in the Central South reported the greatest difficulty in accessing pediatric care; a high rate of cancer (equal to the Northwest), pre-diabetes, stroke, high cholesterol, and diagnosed depression; and highest percentage of individuals who are overweight. Patchogue is a hotspot for Medicaid admissions ED admissions, and has a particularly high PQI rate for adult respiratory conditions (PQIs 5 and 15) and pneumonia (PQI 11).

- The **Central North** has a population of 389,195.[31] Approximately 11% are Medicaid recipients[32] (42,811) and 6% (24,897) are uninsured.[33] The average household income is the second highest of the five submarkets. This area shows lower rates of Medicaid admissions and ED visits than the other submarkets, but specific zip codes within the region have particularly high rates for several PQIs. These includes adult angina without procedure (PQI 13), adult diabetes (PQIs 1, 3, and 16), adult dehydration (PQI 10), adult urinary tract infection (PQI 12), and pediatric gastroenteritis and urinary tract infections (PDI 16 and 18). In comparison to the other submarkets, major findings among the Target Population survey respondents in the Central North suggest that this area has the greatest percentage of individuals with activity limitations; the most problems in obtaining prescription drugs; the lowest rates of regular sources of care and recent child check-ups; and the highest percentages reporting that local healthcare is fair or poor. In terms of clinical conditions, the Central North has the highest rate of heart disease and hypertension;

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[24] Truven Health Analytics Inc. 2014 Population Planning (Demographics - Population by age band, gender, and race)
[25] Medicaid Members Data from DSRIP 2012; Uninsured data from ACS 2012 5 Year Estimate
[26] American Community Survey [US Census] (September 2014). 2012 American Community Survey 5-Year Estimates of Insurance Coverage, Table DP03; using American FactFinder; extracted from: http://factfinder2.census.gov
[27] Truven Health Analytics Inc. 2014 Population Planning (Demographics - Population by age band, gender, and race)
[28] Medicaid Members Data from DSRIP 2012; Uninsured data from ACS 2012 5 Year Estimate
[29] American Community Survey [US Census] (September 2014). 2012 American Community Survey 5-Year Estimates of Insurance Coverage, Table DP03; using American FactFinder; extracted from: http://factfinder2.census.gov
[30] Truven Health Analytics Inc. 2014 Population Planning (Demographics - Population by age band, gender, and race)
[31] Truven Health Analytics Inc. 2014 Population Planning (Demographics - Population by age band, gender, and race)
[32] Medicaid Members Data from DSRIP 2012; Uninsured data from ACS 2012 5 Year Estimate
[33] American Community Survey [US Census] (September 2014). 2012 American Community Survey 5-Year Estimates of Insurance Coverage, Table DP03; using American FactFinder; extracted from: http://factfinder2.census.gov

unfavorable measures related to injury and violence; and the lowest number of people who are actively trying to lose weight through diet and exercise.

Priorities in the Total Population

The PRC Population Survey prioritized needs that represent the greatest opportunities in the Total Population. Many of these are also areas of focus within DSRIP and will be addressed within our project selections.

Suffolk County Total Population: Areas of Opportunity Identified Through This Assessment	
Access to Health Services	• Insurance Instability • Emergency Room Utilization
Cancer	• Cancer Incidence (Prostate, Lung, Colorectal, Cervical, Female Breast)
Chronic Kidney Disease	• Kidney Disease Deaths
Disability & Chronic Pain	• Activity Limitations • Sciatica/Chronic Back Pain
Heart Disease & Stroke	• Heart Disease Deaths
Immunization & Infectious Diseases	• Septicemia Deaths
Injury & Violence Prevention	• Unintentional Injury Deaths (Including Motor Vehicle)
Infant Health	• Prenatal Care
Nutrition, Physical Activity & Weight	• Population With Park Access • Meeting Physical Activity Recommendations • Vigorous Physical Activity • Prevalence of Overweight
Substance Abuse	• Alcohol Use • Drug-Induced Deaths

Priorities in the Target Population

By comparing a sample of Medicaid and uninsured respondents to the countywide findings, significant disparities are evident. All categories of need shown below are consistent with or related to healthcare utilization patterns. The greatest of these are outlined in the following table:

Suffolk County Target Population: **Areas of Significant Health Disparity**	
Access to Healthcare Services	- Difficulty Accessing Healthcare - Cost of Prescriptions - Cost of Physician Visits - Inconvenient Office Hours - Appointment Availability - Difficulty Finding a Physician - Lack of Transportation - Skipping/Stretching Prescription Doses - Specific Usual Source of Care - Emergency Room Utilization - Difficulty Getting Child's Healthcare in Past Year
diabetes	diabetes Prevalence
Injury & Violence	Victim of Domestic Violence
Mental Health	- Overall Mental Health Status - Diagnosed Depression - Symptoms of Chronic Depression - Stress
Nutrition, Physical Activity & Weight	- Fruit/Vegetable Consumption - Access to Fresh Fruits/Vegetables - Obesity - Childhood Overweight & Obesity - Lack of Leisure-Time Physical Activity - Meeting Physical Activity Recommendations
Oral Health	- Regular Dental Care - Dental Insurance Coverage
Respiratory Disease	- Chronic Obstructive Pulmonary Disease Prevalence - Childhood Asthma
Tobacco Use	- Cigarette Smoking - Tobacco Smoke in the Home
Vision Health	- Blindness/Uncorrectable Trouble Seeing - Regular Vision Care

Among Medicaid members, utilization statistics across the five submarkets collectively show that, when one considers both primary and secondary diagnoses, cardiovascular disease (CVD) and psychiatric disorders are the most prevalent diagnoses among inpatients relative to DSRIP conditions of interest. These represent a subset of the total 2012 Medicaid discharges of 34,944.

	Primary Dx Discharges	**Secondary Dx Discharges**	**Total Diagnoses**	**% of Total Diagnoses**
CVD including hypertension	2,300	14,927	17,227	49.3%
Psychiatric disorders	2,431	10,678	13,109	37.5%
Perinatal	6,260	6,043	12,303	35.2%
Substance Use disorders	1,905	5,464	7,369	21.1%
diabetes	702	6,268	6,970	19.9%
Asthma	683	2,929	3,612	10.3%
Chronic Kidney Disease	346	3,142	3,488	10.0%
cancer	744	2,722	3,466	9.9%

	Primary Dx Discharges	Secondary Dx Discharges	Total Diagnoses	% of Total Diagnoses
COPD	598	2,759	3,357	9.6%
HIV	49	331	380	1.1%

Sources:[34]

The input from **Key Informants** was also highly informative. As shown below, Key Informants ranked the most pressing issues to be:

- Mental health
- Access to housing
- Substance abuse
- Nutrition, physical activity and weight
- Tobacco use
- Access to healthcare services

PRC Community Health Needs Assessment
Suffolk County, NY

Key Informants: Relative Position of Health Topics as Problems for the Target Population in the Community
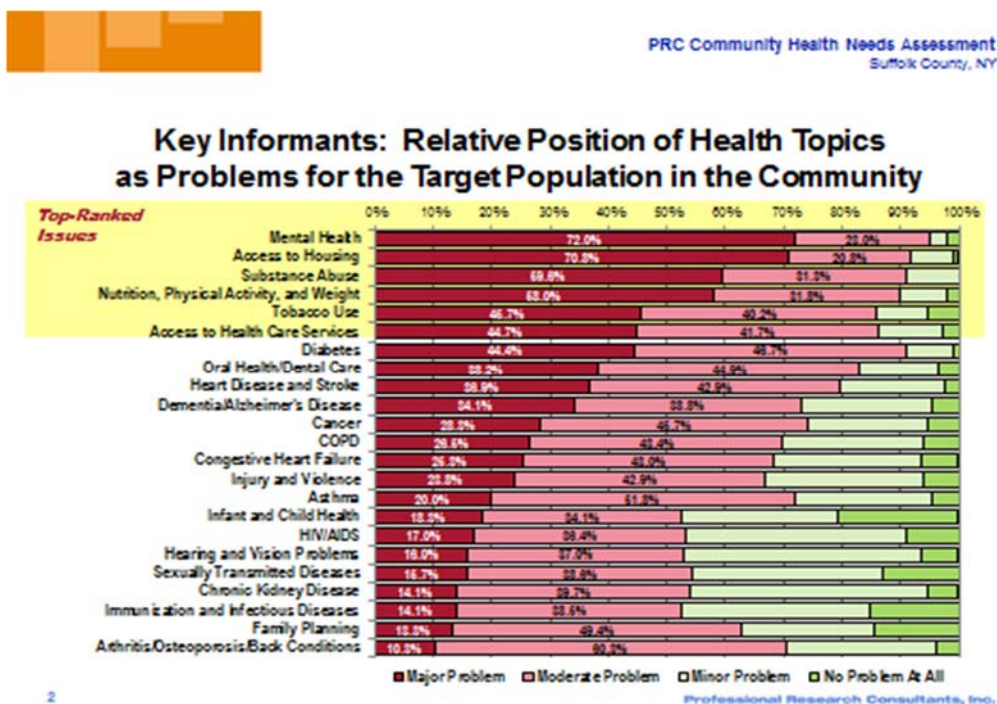
Summary of Health Delivery System Implications
To address these priority areas, the County has many assets and resources, but there is general fragmentation and misalignment of resources and needs. As discussed later, there is excess inpatient capacity, but shortages in outpatient and community-based resources. In particular, there is a severe shortage of primary care and behavioral health providers. Resources are often not located in close proximity to Medicaid/uninsured hotspots. The care coordination infrastructure lacks standardization, there is minimal health information

[34] Inpatient volume estimated from SPARCS 2012 LDS for Medicaid members served in a Suffolk facility; Chronic disease prevalence, unless noted, are from the Chronic Disease Data for 2012 Medicaid Population*; Population size data from NYSDOH
New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk; New York State Department of Health [DOH]. (2014, May). Medicaid Beneficiaries, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Beneficiaries-Inpatient-Admissions-and-Em/m2wt-pje4; (a) Estimated from DSRIP Dashboard for CY 2013)

connectivity, and providers are not using staff at the top of their licenses. No hospital in the County has a robust transitional care program with a full package of 30-day transition interventions. Few primary care practices have Patient Centered Medical Home (PCMH) designation and the ratio of primary care providers/population falls well below national averages.[35]

Taken together, the findings of the primary research and secondary data analysis are highly consistent. To achieve DSRIP aims, projects need to focus on the chronic diseases that are most prevalent and that are leading to unnecessary utilization, with improving behavioral health as a crosscutting theme. Access problems are paramount, and the delivery of health services needs to be rationalized and coordinated in a way that will encourage appropriate use of services and patient engagement while reducing health disparities. Excess hospital beds need to be closed with capacity transferred to the outpatient and community settings. Social determinants of health must be recognized and addressed for specific populations, as this is perhaps the most fundamental aspect of improving population health.

iii.   IMPLICATIONS FOR PROJECT SELECTION

Domain 2 – System Transformation Projects

All PPSs were required to include at least two projects from this domain, with at least one from sub-lists A and B. Within sub-list A, project 2.a.i was chosen because it is the most far-reaching and provided the flexibility to address the key shortcomings of the County healthcare delivery system. As implemented here, this project will include an expansion of primary and perinatal care capacity in conjunction with the County FQHCs and a medication management program to reduce medication errors for the benefit all projects. Within sub-list B, the indicated projects were chosen because of the unfavorable performance in the County on measures of unnecessary utilization, the high rate of transfers from nursing homes, and high rates of chronic disease, including behavioral health. Project 2.d.i was chosen because of the high numbers of Medicaid and uninsured members who rarely/never use primary and preventive services and overuse the Emergency Department (ED).

2.a.i. Create Integrated Delivery Systems that are focused on Evidence Based Medicine / Population Health Management
This project will provide fundamental infrastructure for the PPS. The following findings make this project particularly important:
- PPR rates vary substantially between Suffolk County hospitals. Observed rates range from 12.71 at ELIH to 3.13 at SHH of "at-risk" admissions. The statewide observed rate is 6.73. When risk-adjusted, four out of the 11 Suffolk hospitals have PPR rates above their expected values. [36]
- The Suffolk PPV rate is essentially the same as the statewide rate, but over 71% of Medicaid ED visits are categorized as avoidable.[37]
- PQI and PDI Suites – PQI/PDI composites generally exceed statewide rates.[38]
- While the exact percentage of providers in Regional Health Information Organizations (RHIOs) and achieving Meaningful Use (MU) is not known, our Provider Capability Baseline Assessment survey indicates that providers are unable to share patient information due to limited interconnectivity. Even

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[35] Provider Capability Baseline Assessment
[36] New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011 . Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn
[37] New York State Department of Health [DOH]. (2014, July). Medicaid Potentially Preventable Emergency Visit (PPV) 2012 Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011 . Retrieved July 15, 2014 from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka
[38] Office of Quality and Patient Safety, 2014 Created by Office of Health Systems Management, NYSDOH
https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/performance_data/docs/chartbook1_avoidable_hospitalization_long_island.pdf

among providers who have joined RHIOs, some do not currently comply with state standards for information sharing.

- The Provider Capability Baseline Assessment survey indicated that roughly 50% of PCPs had some level of NCQA Patient Centered Medical Home (PCMH) certification but that no providers in the region currently provide comprehensive care management (CM) services. Risk stratification of patients is sporadic and unstandardized.

2.b.iv. Care transitions intervention model to reduce 30 day readmissions of chronic health conditions
- There were 26,714 "at-risk" admissions within Suffolk County in 2012, which in turn triggered 1,612 Potentially Preventable Readmission (PPR) chains.[39] Many of the causes of readmissions could be addressed through implementation of an effective Transitions of Care (TOC) Regimen. Recommended TOC practices focus on communications both within the hospital as well as between the hospital and community providers.
- This project choice is also supported by the measures of potentially preventable utilization cited for project 2.a.i above, and by the high mortality and incidence rates of chronic disease. Suffolk County compares unfavorably to NYS related to mortality rates for kidney disease and respiratory disease. There are disparities among Medicaid/uninsured populations related to diabetes and many chronic disease risk factors. No hospital in the County has a comprehensive transitional care program.

2.b.vii. Implementing the INTERACT project
- This project choice is supported by the measures of potentially preventable utilization cited for project 2.a.i above.
- National data indicate that among dual eligible beneficiaries in SNFs, 40% of hospitalizations are unnecessary and that 23.5% of people admitted to a post-acute care SNF were re-hospitalized within 30 days.[40]
- A survey of PPS partners indicates low SNF participation in Health Information Exchanges (HIE), and that many do not use INTERACT or INTERACT-like tools.

2.b.ix. Implementation of observational programs in hospitals
- This project emphasizes the reduction of short stay admissions and improvement in associated care coordination. There are many short stay (length of stay less than 2 days) admissions in Suffolk County—27% of Medicaid admissions (9,475) were short stay.[41] This population might have been served by an observation status if the capacity were available. The Provider Capability Baseline Assessment showed a lack of care coordination. The current process for the use of observation status commonly leads to situations where "the patient got lost up on the floor" or "stayed longer than they needed to." Care management and social work support were not targeted toward the observation status population. Also, while some mechanisms are in place at each hospital to schedule post-discharge follow-up appointments, there was no dedicated, measured process to ensure that patients consistently made follow up appointments and received medication reconciliation. There are no direct links between the PCPs, behavioral health providers or SNFs and the observation status patients. No community providers are currently receiving information about these patients and none have a mechanism to directly admit patients to observation units. The top medical drivers of short hospital stays across Suffolk County are non-specific chest pain, epilepsy

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[39] New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011 . Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn
[40] Mor, V., Intrator, O., Feng, Z., & Grabowski, D. C. (2010). The revolving door of rehospitalization from skilled nursing facilities. *Health Affairs*, 29(1): 57-64. doi: 10.1377/hlthaff.2009.0629
[41] Inpatient volume estimated from SPARCS 2012 LDS for Medicaid members served in a Suffolk facility; Chronic disease prevalence, unless noted, are from the Chronic Disease Data for 2012 Medicaid Population*; Population size data from NYSDOH

and asthma, as well as behavioral health—where a 72 hour stay is considered short.[42] Many of these admissions are the result of insufficient outpatient chronic care and care coordination.

2.d.i. Implementation of Patient and Community Activation Activities to Engage, Educate and Integrate the uninsured and low/non-utilizing Medicaid populations into Community Based Care

- A contributing factor to the high level of unnecessary utilization as cited for project 2.a.i is the lack of patient engagement among Medicaid and uninsured populations such that they are not connected to a PCP for effective primary and preventive care. Approximately 29% of the estimated 240,000 Medicaid members (approximately 69,381 people) are non- or low-utilizers.[43] It is very important to engage these members if the Suffolk PPS is to achieve DSRIP goals.
- An estimated ten percent of Suffolk County residents are uninsured. They have more difficulty than any other payer group in accessing care due to both cost and availability barriers.
- Eleven communities in Suffolk County have uninsured rates in excess of 20%.
- While a number of CBOs have outreach programs, there is no coordinated countywide effort to promote patient engagement.

Domain 3 – Clinical Improvement Projects

Within Domain 3, PPSs were asked to choose among the following clinical conditions: behavioral health (required); cardiovascular health; diabetes care; asthma; HIV/AIDS; perinatal care; palliative care; and renal care. Providers could choose a maximum of four. Of these clinical areas, all except HIV/AIDS have been selected as standalone projects or incorporated into other projects. Perinatal care has been included in project 2.a.i (Integrated Delivery Systems) and a palliative care component has been included within project 2.b.vii (INTERACT). HIV/AIDS was not chosen as a priority condition because incidence and prevalence rates are low within the County and health disparities do not exist related to these conditions.[44]

3.a.i. Integration of primary care services and behavioral health
A sizeable fraction of the global burden of disease and years lost to disability is associated with psychiatric illness, including substance use. Existing evidence suggests positive effects of integrating care on processes of care, preventive interventions and outcomes. Other findings include:

- Behavioral health disorders, including substance abuse, are highly prevalent in the Medicaid population. Out of 34,944 Medicaid discharges in Suffolk County, 13,109 (37.5%) had either primary or secondary mental health diagnoses; substance abuse appears as a primary or secondary diagnosis 21% of the time.[45] Claims analysis suggests that almost 60,000 Medicaid members (almost 25%) have some form of significant mental health disorder and over 17,000 have substance abuse disorders.[46]
- Almost 32% of Medicaid members rate their mental health as fair/poor and over a quarter indicate that they are depressed. Fifty three percent of the Target Population reported chronic symptoms of depression compared with 27.3% of the total population.[47] Seventy-two percent of Key Informants reported mental health and 60% reported substance use disorders as major problems.[48]
- Physical/mental health comorbidities are high: almost half of individuals in OMH programs with a cardiometabolic disorder (about 43% of all OMH program patients) are also prescribed antipsychotics. A sizeable fraction of individuals are on multiple medications suggesting that medication thinning

[42] New York State Department of Health [DOH]. (2014, April). Hospital Inpatient Discharges (SPARCS Limited Data Set): 2012.
[43] NYS DOH, Interim Attribution for Performance
[44] NYS Prevention Agenda 2013-2017; PRC Population Survey
[45] Inpatient volumes estimated from SPARCS 2012 LDS for Medicaid members served in Suffolk County
[46] New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk
[47] PRC Population Survey
[48] PRC Population Survey

algorithms may be especially valuable in this high-risk, high-utilization group. Physical conditions that can mediate early mortality, such as metabolic syndrome, are increased in individuals with psychiatric disorders and those with diabetes have increased rates of depression.

- When individuals are first experiencing behavioral health symptoms, they often seek care from their primary care provider (PCP). However, PCPs are not adequately trained to address behavioral health disorders and have limited time and no associated reimbursement.
- Behavioral health service capacity is inadequate and as patients transition from inpatient to outpatient care, they often have long wait times for appointments. [49] Key Informants indicated that mental health capacity was the area most difficult to access.

3.b.i. Cardiovascular health - Evidence-based strategies for disease management in high risk/affected populations (adult only)

- Cardiovascular disorders were the third leading cause of avoidable admissions in Suffolk County.[50] In comparison to the Total Population, the Target Population in Suffolk County has unfavorable levels of risk behaviors related to activities such as taking action to control high blood pressure or cardiovascular risk factors or smoking.[51]
- The Target Population experiences higher rates of cardiovascular disease than the general population in Suffolk County. The prevalence rate of heart disease in the Target Population is approximately 2.5 times higher than the average prevalence rate within Suffolk County as a whole—15.6% compared to 6.2%.[52] The prevalence rate of high blood pressure is 40.2% for the Target Population, while the average rate across Suffolk County is 32.5%.[53]
- In the Target Population, only 81.4% of Medicaid members with high blood pressure are currently taking actions to control their condition. Within the Total Population, 92.6% are actively trying to control their blood pressure.[54]

3.c.i. Diabetes Care - Evidence-based strategies for disease management in high risk/affected populations (adult only)

- The diabetes Composite PQI is the second leading cause of avoidable admissions in Suffolk County. The risk adjusted rate was 623 per 100,000 versus an expected rate of 544 per 100,000.[55]
- Almost 18,000 Medicaid members in Suffolk County have diabetes.[56] It is a secondary admission diagnosis in approximately 20% of those with hospital admissions.[57]
- The diabetes incidence rate in Suffolk County exceeds that of NYS among both the dual and non-dual Medicaid populations.[58]

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[49] News from the Field: New York State Office of Mental Health Long Island Field Office. Sullivan, Ann Marie; Carlin, Martha. Edition: Summer 2014.
[50] Health Data NY >> PQI (https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn >> FILTER - Suffolk, 2012, PQI_S02 - View Medicaid PQI Hospitalization Column
[51] PRC Population Survey
[52] PRC Population Survey
[53] PRC Population Survey
[54] PRC Population Survey
[55] New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn; New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce
[56] New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk
[57] Inpatient volume estimated from SPARCS 2012 LDS for Medicaid members served in a Suffolk facility; Chronic disease prevalence, unless noted, are from the Chronic Disease Data for 2012 Medicaid Population*; Population size data from NYSDOH
New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk; New York State Department of Health [DOH]. (2014, May). Medicaid Beneficiaries, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Beneficiaries-Inpatient-Admissions-and-Em/m2wt-pje4; (a) Estimated from DSRIP Dashboard for CY 2013)
[58] PRC Population Survey

- Among children, short term complications of diabetes are highly prevalent, with an observed to expected PQI ratio of 1.71.[59]
- Most ED visits associated with diabetes are from Medicaid members living in Brentwood, Bay Shore, East Patchogue, and Riverhead. In the Target Population, 15.7% of adults have been diagnosed with diabetes, a number that is less favorable than the countywide proportion at 11%.[60] Another 6.2% of Suffolk County Total Population adults report that they have "pre-diabetes" or "borderline diabetes" (the prevalence is 8.7% in the Target Population). Diabetes is highest in the Medicare and Medicaid populations; persons without any coverage are also more likely than those with private insurance to be diabetic.[61] Again, this represents a significant health disparity.

3.d.ii. Expansion of Asthma home-based self-management program
- One of the greatest disparities for the Target Population is related to respiratory disease. Childhood asthma prevalence is 11.9% among the Medicaid/Self-Pay population in Suffolk County.[62]
- According to Medicaid claims, asthma is one of the top eight most prevalent chronic conditions in Suffolk County.[63] SPARCS data also indicate that asthma is one of the top ten drivers of hospital admissions, readmissions, and ED visits in Suffolk County.
- There are 13,457 Medicaid members with asthma in Suffolk County; 6,879 Medicaid members with asthma were seen in the ED during the course of a year, generating a total of 18,786 visits; 3,704 individual members were hospitalized generating 6,796 admissions for any cause. [64]
- Total PQI and PDI annual admissions data show that asthma in younger adults and children is a significant cause of avoidable admission in Suffolk County.[65]

Domain 4 – Population-wide Projects: New York's Prevention Agenda

Within Domain 4, PPSs were asked to choose among the following focus areas: Promote Mental Health and Prevent Substance Abuse; Prevent Chronic Disease; Prevent HIV and STDs; and Promote Healthy Women, Infants and Children. The Suffolk PPS selected the first two focus areas. As indicated earlier, HIV/STDs are not a priority condition in Suffolk County. Programs for maternal, infant and child health have been explicitly incorporated into project 2.a.i (Integrated Delivery Systems).

4.a.ii. Prevent Substance Abuse and other Mental Emotional Behavioral Disorders
- Medicaid claims data indicate that substance abuse disorders (SUDs) are the second leading driver of emergency department (ED) visits in Suffolk, exceeded only by mental health conditions.[66]
- The hospitals in our PPS report that, on average, approximately 40-50% of patients who visit their EDs or have been admitted to their medicine units have some type of behavioral health disorder.

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[59] New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn; New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for

[60] PRC Population Survey
[61] PRC Population Survey
[62] PRC Population Survey
[63] New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk
[64] New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk
[65] Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

[66] New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk

- The PRC Population Survey revealed that Suffolk County binge drinking (20.7%) exceeds the statewide rate (18.1%). In addition, the rate of chronic drinking (7.4%) is higher than the national rate (5.2%). During Key Informant interviews, 60% reported SUDs are a major problem in Suffolk, yet only one hospital of 11 uses the Screening, Brief Intervention, and Referral to Treatment (SBIRT) practice in the ED and only one uses it for admitted patients.
- According to OMH BHO data, only 38.3% of SUD discharges from an inpatient chemical dependency program actually receive an appointment within 30 days.

4.b.ii. Population-based health chronic disease prevention and management

Based on the NYS Prevention Agenda, a number of chronic diseases/conditions not addressed in Domain 3 projects are particularly problematic in Suffolk. Foremost among these is cancer. This will be the primary focus of this project. It will also address some of the lifestyle factors that lead to chronic disease.

- Cancer is the leading cause of premature death in Suffolk County. It is the primary diagnosis in 4,965 Medicaid admissions per year in Suffolk County[67] Death rates for the most common cancers (lung, breast, prostate, and colorectal) are generally above the NYS rates (with the exception of prostate cancer), and incidence rates are higher for each of these cancers in relation to both NYS and national rates. These four cancers represent approximately fifty percent of the new cases and the deaths annually in both Suffolk County and statewide.[68]
- Non-Hispanic Blacks have a notably higher prostate cancer incidence than whites in Suffolk County. Blacks also have a higher cervical cancer incidence rate while whites have a higher incidence of breast and lung cancers (the colon/rectal cancer rates are similar by race).[69]
- The high cancer rates on Long Island have received a great deal of publicity in recent years, perhaps contributing to relatively high screening rates for breast and colorectal cancer. However, almost 30% of our Key Informants rated cancer as a major problem.
- According to the NYS Prevention Agenda, most providers in Suffolk County chose chronic disease as the priority for focus. Particularly relevant to our focus on cancer are particular measures in the Prevention Agenda related to: the percentage of adults who are obese (29.1); the percentage of children and adolescents who are obese (17.5%); the percentage of cigarette smoking among adults (14.4%); and the percentage of adults who receive a colorectal cancer screening based on the most recent guidelines - Aged 50-75 years (73.7%).

A.   DESCRIPTION OF HEALTH CARE RESOURCES AND COMMUNITY RESOURCES

i.   HEALTH CARE RESOURCES

Health care resources have been grouped by type and geographic location. From the standpoint of location, providers have been assigned to one of seven submarkets that generally reflect hospital service areas: the Southwest, the Northwest, the Core, the Central South, the Central East, the North Fork, and the South Fork. (Note: the PRC Population Survey focused on five submarkets –collapsing the South Fork, North Fork and Central East into one subarea for the telephone survey.)

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[67] New York State Department of Health [DOH]. (2014, April). Hospital Inpatient Discharges (SPARCS Limited Data Set): 2012.
[68] Suffolk County Department of Health, Community Health Assessment 2014-2017
[69] PRC Population Survey

Suffolk County Submarkets
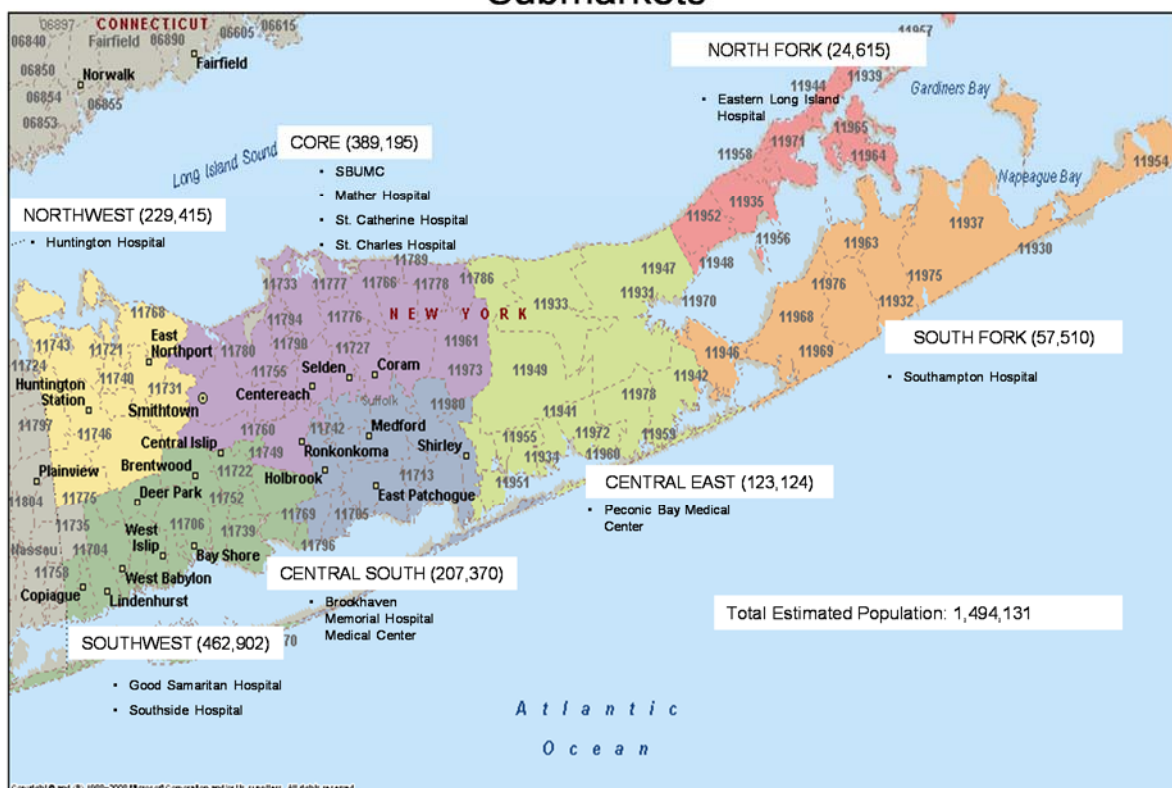
Hospitals - Suffolk County has 11 hospitals with a presence in all seven submarkets: Brookhaven Memorial Hospital Medical Center, Eastern Long Island Hospital, Good Samaritan Hospital, Huntington Hospital, John T. Mather Memorial Hospital, Peconic Bay Medical Center, St. Catherine of Siena, St. Charles Hospital, Southampton Hospital, Southside Hospital and Stony Brook University Hospital. The bed capacities range from 90 to 603. Four hospitals are located in the Core and two are located in the Southwest. The remaining five submarkets have one hospital each. Of these hospitals, Eastern Long Island treats the largest proportion of Medicaid Risk, Fee for Service, Medicaid and Self Pay (51.7%).[70]

Ambulatory Surgery Centers - All Suffolk hospitals are certified for ambulatory surgery "multi-specialties" with the exception of Huntington Hospital. In addition, there are 14 non-hospital-based freestanding ambulatory surgery centers. These services are highly concentrated in the Core and Northwest submarkets, and notably absent or scarce in the North Fork and Central South, areas with higher proportions of Medicaid and self-pay populations.

Urgent Care Centers - Because there is no standard regulation of urgent care centers in NYS, it is difficult to comprehensively catalog them. They also seem to be proliferating rapidly. According to an extensive web based search, there are 45 urgent care centers in Suffolk County. The majority (30) are located in western Suffolk County, the Core, the Southwest and the Northwest submarkets. There are nine located in central Suffolk County (the Central East and Central South submarkets) and six on the east end (North Fork and South Fork submarkets). The centers largely target privately insured patients and tend to be concentrated in higher income communities that are inaccessible to Medicaid and self-pay populations.

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[70] SPARCS 2012

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Health Homes - There are three DOH-designated Health Homes in Suffolk County providing care management and service integration to Medicaid beneficiaries with complex chronic medical and behavioral health conditions. They are: Hudson River Healthcare dba Community Health Care Collaborative, FEGS Health and Human Services System, and North Shore Long Island Jewish Health Home.

Federally Qualified Health Centers and County Clinics- For years, the SCDHS has operated ten community clinics. Hudson River Healthcare is currently in the process of taking them over, and to date, seven have FQHC status. Most of the centers are located in neighborhoods with high uninsured and Medicaid populations. The Southwest submarket has three centers—located in Amityville, Brentwood and Wyandanch. There are also centers in the Core (Coram); the North Fork (Greenport); the South Fork (Southampton); the Central South (Shirley and Patchogue); the Northwest (Greenlawn); and the Central East (Riverhead).

Primary Care Providers - There currently are 1,272 primary care providers not including obstetrics and gynecology practitioners listed in Suffolk County. Most are in the Core and Southwest. In all areas of Suffolk County, the supply of primary care physicians falls below the demand. Counting hospital residents and hospital employed primary care staff, the total equates to a ratio of primary care physicians to population of 84.9/100,000, or well below the statewide average of 109.6/100,000.[71]

Specialty Medical Providers - There are approximately 3,468 specialty physicians.

Pain Management/Palliative Care - There are approximately 13 facilities serving Medicaid and the uninsured in Suffolk County providing specialty pain management services. These include health centers, hospitals, home health agencies and nursing homes. Additionally, there are five facilities with hospice services. Additional organizations providing pain management services may exist in the County, but there is no directory of such services.

Dental Providers - There are approximately 1,174 dentists in Suffolk County, 972 licensed dental Hygienists, and 53 Certified Dental Assistants. There are also nine dental clinics: three in the Southwest (Brentwood, Bay Shore and Central Islip); four clinics in the Core (Stony Brook, Port Jefferson and Hauppauge); two in the Central East (Riverhead). There are no dental clinics in the Central South, Northwest, North Fork, or South Fork submarkets.

Rehabilitative Services - There are approximately 419 programs and services specializing in physical therapy, occupational therapy and/or speech therapy located in Suffolk County. The majority of the physical therapy programs are in the Core; followed by the Southwest; the Northwest; and Central South. Five or fewer physical therapy programs are located in both the North and South Fork submarkets. Other providers include Occupational Therapy and Speech and Language.

Skilled Nursing Facilities and Assisted Living - There are 42 such facilities in Suffolk County, primarily located in western Suffolk County. There are only two on the North Fork and one on the South Fork.

Home Care Services - There are 99 total Home Care agencies. This includes Licensed Home Care Services, home health agencies, Long Term Home Health Care Agencies (LTHHC), and Home Care Hospice Agencies that serve Suffolk County residents. Of these, the Southwest submarket has the highest number of providers followed by the Core. The remaining markets have fewer. Both the Core and Southwest submarkets have several home care agencies, while the Northwest and Central South submarkets each have the least number.

Laboratory and Radiology Services - Based on an extensive web search, there are approximately 39 radiology service providers in Suffolk County and 64 clinical laboratory service providers that serve Suffolk County. No directory or inventory of such services appears to exist.

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[71] PRC Population Survey

Specialty Medical Programs - An extensive web search revealed 52 programs devoted to treating specialized needs such as eating and autism spectrum disorders.

Pharmacies – Approximately 159 pharmacies are located in Suffolk County, with the majority in the Southwest (50) and the Core (43) submarkets. The Central East market has nine pharmacies, the South Fork has six, and the North Fork has only three pharmacies. This does not include pharmacies in grocery stores. No safety net pharmacies exist in Suffolk County.

Local Health Department Services - The Suffolk County Department of Health Services (SCDHS) includes areas such as prevention and management of infectious disease; asthma management; workplace wellness; diabetes; cancer awareness and education; environmental safety and preservation; and alcohol, tobacco and illicit drug prevention. The SCDHS has the following is divisions: Public Health; Services for Children with Special Needs; Emergency Medical Services; Preventive Medicine; Bureau of Chest Diseases ; Childhood Lead Prevention Program; and the Special Supplemental Nutrition Program for Women, Infants and Children.

Managed Care Organizations (MCOs) - There are 12 MCOs in Suffolk County. Six participate in Medicaid, and eight in Child Health Plus and Family Health Plus. Since 2012, New York State has been mandating managed long-term care (MLTC) for Medicaid beneficiaries relying on community-based long-term care services. Between January and July 2013, MLTC enrollment grew by 27,749 enrollees (31%).

Area Health Education Centers (AHEC) - There are no Area Health Education Centers located in Suffolk County, New York.

Behavioral Health Resources – Suffolk County has one adult state psychiatric facility, Pilgrim Psychiatric Center, and one bed state-operated children's facility, Sagamore Children's Psychiatric Center (CPC).   Other inpatient facilities in the region include two Article 31 and seven Article 28 hospitals.

Other mental health services include seven Assertive Community Treatment (ACT) Teams in Suffolk County, one Comprehensive Psychiatric Emergency Program (CPEP), 27 clinics, 15 comprehensive Personalized Recovery Oriented Services (PROS) programs, one Continuing Day Treatment Program, one Children's Day, and two partial hospitalization programs. Residential services on Long Island include congregate, apartment treatment and supported housing sites. Despite these varied levels of care, the region currently has nearly 1,000 people on waiting lists for mental health housing.

There are 42 OASAS licensed clinics/satellite clinics serving those with substance use disorders and five hospitals that provide OASAS licensed detoxification and rehabilitation services. The Suffolk County Division of Mental Hygiene under the DOH operates Methadone Maintenance clinics in four locations. OASAS long-term residential programs are very limited and sober homes are not considered licensed programs.

OPWDD has established regions for the coordination of services with OMH, DOH and other agencies with whom they partner in providing services. Local regional offices work with local voluntary provider agencies to improve access to and coordinate services within a region. There are 74 voluntary agencies serving Suffolk, several of which provide behavioral health services within Article 28 licensed Diagnostic and Treatment Centers.

There is a significant shortage of resources and trained professional for those with dual diagnoses of mental illness and developmental disabilities, often resulting in avoidable visits to CPEP. There are 872 psychologists licensed to practice in Suffolk (58/100,000); 2,349 social workers (156/100,000); 353 licensed mental health counselors (23/100,000); and 22 licensed behavior analysts (1.5/100,000).

Behavioral health resources are scattered throughout the County with a limited number of providers on the east end (both the North Fork and the South Fork). Among the providers on the east end, many do not accept insurance. There is a chronic shortage of prescribers across all of Suffolk County (psychiatrists and psychiatric nurse practitioners), leaving many of the hospitals and community based organizations unable to meet the demand. Currently, all clinics report long waiting lists.

ii. **COMMUNITY BASED-RESOURCES**

Housing for the Homeless: There are 34 organizations that provide housing for the homeless. Three specifically provide services to veterans, three to individuals with HIV/AIDS, five to children and/or pregnant women, and five to the disabled. The majority of services are provided by the Family Service League, located in the Northwest submarket (Huntington). There are two organizations in Brentwood and three in Patchogue, both of which are Medicaid/uninsured-dense areas. The remaining organizations are situated in Mastic, Port Jefferson, Bay Shore, and Deer Park.

Food Pantries, Community Gardens, and Farmer's Markets: There are 216 food banks/pantries in Suffolk County, with a majority being affiliated with a religious organization. The majority of these provide services once a week or for limited hours (e.g. Wednesdays 12-2pm). The food banks/pantries are dispersed throughout Suffolk County and seem to adequately service areas with high Medicaid or uninsured populations. There are 11 food banks/pantries in Brentwood, three in Huntington Station, six in Patchogue and 11 in Riverhead. In general, there is a need for expanded hours of operation. Though some seasonal community gardens or farmer's markets exist, they are very limited in their availability and impact.

Clothing/Furniture Banks: There are 16 clothing banks and four furniture banks. Only one clothing bank is situated in a Medicaid/uninsured-dense area (Brentwood). The remaining organizations are in towns that include Blue Point, Farmingville, or Selden. There is a need for more services of this type in Medicaid/uninsured-dense areas.

Libraries: There are 57 libraries in Suffolk County. These are mainly public libraries and are dispersed throughout the County. There is one library each in the Medicaid/uninsured-dense areas of Brentwood, Huntington, Patchogue, and Riverhead. Information about these organizations (i.e., walking distance) is not available, but it can be assumed that not all individuals in these areas have equal access to this service.

Transportation Services: There are 19 transportation companies in Suffolk County. The majority of these provide service to special populations like the disabled and the elderly. One service is aimed at veterans and another at individuals with HIV/AIDS. About half of these are provided through local governmental programs, and thus only serve only the towns in which they are based, including Huntington and Riverhead. There is a Medicaid transportation service based in Hauppauge that serves Suffolk County as whole. Non-governmental transportation services are based in Islandia, Huntington, Patchogue, and Port Jefferson.

Peer and Family Mental Health: There are 25 organizations that provide peer and mental health support, 11 of which are aimed at children or teenagers. The Family Service league is a major provider of this service and is located in Huntington. Apart from one provider in Patchogue, there are no services in Medicaid/uninsured dense areas, highlighting the need for mental health organizations situated in Brentwood, Huntington Station, and Riverhead.

Family Support and Training: There are 53 organizations that provide this type of service. Many of these organizations provide support to families with children and/or individuals with cancer, mental health issues, and substance abuse. The Family Service League, based in Huntington, is a major provider of this type of

service. The Medicaid/uninsured-dense area, Patchogue, has three such providers and Brentwood has one, highlighting the need for more services of this type.

Local Governmental Social Services Programs: There are 33 governmental resources covering a wide range of services, including employment, family support, transportation, community outreach, and housing for the homeless. Some organizations also provide services to individuals with chronic diseases like diabetes, asthma, cancer, Alzheimer's and others. The information provided on the websites for governmental programs was limited. Government services in Patchogue only provide economic or employment services and those in Huntington serve only the elderly or disabled. There are no government services located in Brentwood and only one in Riverhead devoted to cancer. The majority of services are situated in Hauppauge.

Education: Sixteen organizations in Suffolk County provide education on topics such as domestic violence, cancer, and mental health. Educational programs are scarce in Medicaid/uninsured-dense areas.

Specialty community-based and clinical services for individuals with intellectual or developmental disabilities, and services for the visually impaired and deaf: There are at least 34 organizations providing services to individuals with intellectual or developmental disabilities. These services include transportation, day homes, family support, housing, and employment. There are few resources for individuals with intellectual and developmental disabilities in Medicaid/uninsured-dense areas, again highlighting the need for more organizations based in Brentwood, Huntington, Patchogue, and Riverhead. In this subset of resources, organizations providing services to the blind and deaf were also included. There are a limited number of community-based resources for this population. One in particular, Helen Keller Services for the Blind, provides services to visually impaired adults and children and is situated in a Medicaid/uninsured-dense population.

National Alliance on Mental Illness (NAMI): There is one NAMI support group that meets at Mather Hospital, located in Port Jefferson.

Peer Support/Recovery Coaches: There are 20 locations of organizations that provide recovery services, one of which is located in a Medicaid/uninsured-dense area. Most of the services are provided through two organizations: Seafield and Pederson-Krag.

Alternatives to Incarceration: Family Service League in Bay Shore is the only organization providing an alternative to juvenile incarceration.

Community-Based Education Programs: There are 16 such programs in Suffolk County. They are mainly provided through Adelante and Family Service League. They include programs in medical billing, computer use, literacy, and other skills. The programs provided through the Family Service League are based in Huntington, a Medicaid/uninsured-dense area, while others are in Central Islip and Port Jefferson.

Youth Development: There are 26 organizations that provide youth development services. These focus on social, emotional, and vocational skills. Those provided through Family Service League are based in Huntington and Bay Shore.

Special Needs Children: There are eight organizations that provide services to special needs children. These services are mainly day homes or learning centers where children learn social, vocational, and other skills. Few of these are in Medicaid/uninsured-dense areas.

Individual Employment Support Services: There are 28 employment resources in Suffolk County, with a focus on individuals with disabilities. Other special populations included are veterans, the homeless, and those with

low incomes. The Family Service League and Federation of Organizations are main providers. Brentwood and Riverhead lack employment services.

HIV/AIDS: There are 17 HIV/AIDS service organizations that provide transportation, advocacy, health status, housing, and other resources, some of which are in Brentwood and Patchogue. There is one Ryan White program.

Despite the large volume of resources in Suffolk County, there is a scarcity of vital resources in areas with high Medicaid and uninsured populations. Community-based resources need to be expanded or made more accessible to the DSRIP target populations, as well as other special populations like women, the visually impaired, and disabled children.

iii.   DOMAIN 2 METRICS – BASELINES

Domain 2 – System Transformation Metrics				
State-wide Measure	Measure Name	County Baseline	State Baseline	Measure and units
A. Create Integrated Delivery System				
Potentially Avoidable Services				
X	Potentially Avoidable Emergency Room Visits	33.9[72]	36.1	Risk adjusted rate per 100 people
X	Potentially Avoidable Readmissions	6.2	6.1	Median risk adjusted rate per hospital in area.
X	PQI Suite – Composite of all measures	1,969.3	1,776.6	Risk adjusted rate per 100,000 people
X	PDI Suite – Composite of all measures	277.6	344.0	Risk adjusted rate per 100,000 people

B. Description of the Community Served

i.   Demographics of the Population

Population Size, Age, Sex, and Race Ethnicity
Suffolk County spans a 90-mile stretch, an area of about 900 square miles that is home to both suburban and rural communities. Once noted for its homogeneity and relative isolation from encroaching suburban sprawl, Suffolk County is now increasingly diverse both ethnically and racially with rapidly expanding business development. The County has ten townships: Huntington, Babylon, Islip, Smithtown, Brookhaven, Riverhead, Southampton, Southold, East Hampton and Shelter Island. Townships are further divided into 31 villages, 72 school districts, and 18 legislative districts. Much of the area is densely populated, with 97.4% of the population living in areas designated as urban. While it is overall more urban than both NYS and the nation, many areas on the eastern end are considered rural with the consequent isolation from healthcare and

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[72] PPV rates differ slightly between NYSDOH DSRIP website and SPARCS data 2012.

community resources. Amidst the general affluence, there are pockets of poverty that show highly unfavorable indicators in terms of the social determinants of health and health disparities.

Suffolk County has a total population of 1,492,360 residents according to latest census estimates. [73] Between the 2000 and 2010 US Censuses, the population of Suffolk County increased by 73,956 persons, or 5.2%. This is a greater proportional increase than seen statewide but a lower proportional increase than nationwide. Census profiles indicate that 23.8% of residents are infants, children and adolescents (age 0-17); another 62.5% are age 18 to 64; and 13.7% are aged 65 and older. In general, these percentages are close to those reported statewide as well as nationally, though Suffolk County is slightly "older" than the state and the nation in terms of median age (39.8 years).

The population in the County is becoming more diverse. In looking at race independent of ethnicity (Hispanic or Latino origin), over 82.0% of residents in Suffolk County are white, and less than 8.0% are Black. Populations across the state and the nation are more diverse. A total of 16.5% of Suffolk County residents are Hispanic or Latino.[74] This is slightly lower than found statewide, but almost identical to that found nationally. Between 2000 and 2010, the Hispanic population in Suffolk County increased by 96,826, or 64.8%. This is proportionally much higher than found statewide and higher than found nationally. A total of 4.9% of Suffolk County population age 5 and older live in a home in which no person age 14 or older is proficient in English (speaking only English, or speaking English "very well").[75] This is lower than found statewide and identical to that found nationally.

Hispanic Population Change
(Percentage Change in Hispanic Population Between 2000 and 2010)

Sources: • US Census Bureau Decennial Census (2000-2010).
          • Retrieved August 2014 from Community Commons at http://www.chna.org.
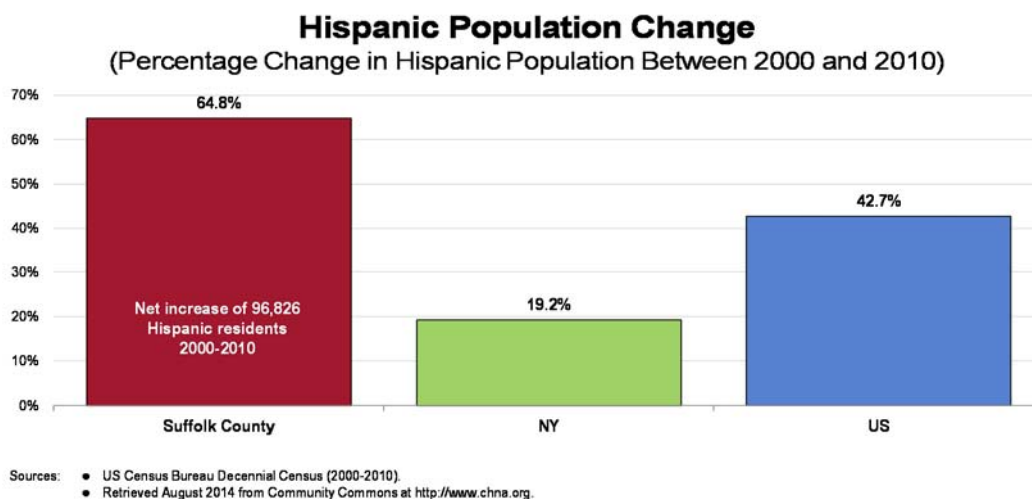
Some communities have particularly high Hispanic populations and poor health outcomes. One such area is Brentwood, located in the southwest portion of Suffolk County. Several years ago, a needs assessment of Brentwood was completed. Findings indicated that:

> *The demographics of Brentwood are different than that of Suffolk County with respect to ethnicity/race, education, country of birth, main language spoken, unemployment, and uninsured rates. Suffolk County is predominately white (81%) with Hispanics and Blacks representing 17% and 7% of the population respectively. Brentwood is more diverse; 69% Hispanic, 48% white, and 16% Black. Although education levels are high overall, in Brentwood 77% of residents have at least a high school*

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[73] US Census Bureau American Community Survey 5-year Estimates (2008-2012)
[74] Ibid
[75] Ibid

education compared with 88% of Suffolk County residents. Almost half of Brentwood residents (47%) reported being born outside of the United States compared with 15% of Suffolk County residents. The majority (80%) of Suffolk County residents primary spoken language is English, compared with 35% of Brentwood residents. Suffolk County has low unemployment (6%) and uninsured (10%) rates, compared with that of Brentwood where there is 9% unemployment and 24% are uninsured…However, this community possesses strengths (e.g., social networks, community-based assets, solid partnerships) that serve as beacons of hope. [76]

Long Island is often cited as being one of the most segregated areas in the nation. A recently published study of racial segregation in school districts indicated that:

African-Americans and Latinos are clustered in areas of such extremely high concentrations, that to achieve racial balance across the region, 74% of Blacks would have to move. That makes Long Island the third most racially segregated region in America. Segregated communities mean segregated schools: island-wide, half of all Black and Latino students attend schools that are at least 95% students of color.[77]

This reflects not only the school district characteristics but that of communities in general.

Income, Education and Employment
The latest census estimate shows 6.1% of Suffolk County population living below the federal poverty level. In all, 17.3% (an estimated 254,008 individuals) of Suffolk County residents live below 200% of the federal poverty level. This is well below what is found both statewide and nationally. In addition, 7.2% of Suffolk County children (an estimated 25,125 children) live below the 200%of poverty threshold. [78]

Among the Suffolk County population age 25 and older, an estimated 10.2% (over 102,900 people) do not have a high school education.[79] This is more favorable than found both statewide and nationally. According to data derived from the US Department of Labor, the unemployment rate in Suffolk County in 2013 was 6.4%. This is more favorable than the statewide and national unemployment rates.

Disability Status, Housing and Homelessness
In regard to the presence of a disability, Blacks are overrepresented. According to the SCDHS:

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 years of age, 3.4% are disabled: 2.5% of whites, 4.3% of African Americans/Blacks, and 2.5% of Hispanics/Latinos. Among

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[76] Goodman, Melody S.; Gonzalez, Maria; Gil, Sandra; Si, Xuemei; Pashoukos, Judith L.; Stafford, Jewel D.; Ford, Elsa; and Pashoukos,Dennis A., "Brentwood Community Health Care Assessment." Progress in Community Health Partnerships: Research, Education, and Action.8,1. 29-39. (2014). http://digitalcommons.wustl.edu/open_access_pubs/2978
[77] ERASE Racism, 2010   www.eraseracismny.org
[78] US Census Bureau American Community Survey 5-year Estimates (2008-2012)
[79] Ibid

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).[80]

Homelessness has increased on Long Island, rising 24.9% overall since 2007. The majority of homeless people have substance abuse problems or severe mental illness. According to the HUD, Long Island had 3,359 homeless individuals in 2012.[81] High concentrations of the homeless are found in Babylon, Islip and Huntington. Homelessness is increasing on Long Island; from 2007 to 2013, there was an increase of 24.9%. Early assessment of 2014 numbers suggests this trend will continue.[82]

Key Informants stressed the importance of improving housing availability: 7 in 10 survey respondents (70.8%) felt that access to housing was a major problem in the Target Population. Housing problems include: high cost, behavioral health needs, the difficulty in finding placement, homelessness, undocumented status among residents, segregation, disability among residents, and lack of education.

Comments included:

> *Access to affordable housing is a major problem due to the high cost of living on Long Island specifically living in Suffolk County. In addition, many clients live in community residences that are unsafe due to potential violence and illegal drug activity. For clients with diagnosed chronic conditions such as HIV there is not enough housing on Long Island. Access to housing is very limited.- Other Health Professional*

> *The cost of living in this area is ridiculously high, hardships are hitting many people and landlords/banks are unforgiving. There is no emergency homeless shelter in this area, nor a shelter of any kind. A referral to DSS sends someone to western Suffolk County for the night, when they are from the East End of Long Island, which complicates any attempts that person is making to pull their life back together. Affordable housing is no such thing, as prices for rental soar over 2000 a month for a studio apartment, and purchasing a place for less than 350,000 is impossible. - Community/Business Leader*

> *The individuals we serve have developmental disabilities. Some of these individuals also have mental health issues. There has been very little residential development for these individual over the past few years and there is no development at this time and into the future. With their limitations in functioning and sometimes behavioral issues, they are not candidates for independent living. Many of our individuals will end up in nursing homes or in hospital beds when there is nowhere else to go. - Social Service Provider*

> *It is not my belief, it's a fact. Wellness starts with housing and treatment. Both are major problems in Suffolk County. There is not enough housing and supportive services so people can safely live in the community. I invite you to apply and see how long the waiting list takes. - Other Health Professional*

> *The population we serve is homeless and/or one step away. There is no regulated/oversight housing for this population. By far, the biggest issue, and one that compromises progress in all other areas. - Other Health Professional*

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[80] Suffolk County Department of Health Services, Community Needs Assessment 2014-2017
[81] https://www.hudexchange.info/resources/documents/2012ahar_pitestimates.pdf
[82] http://events.adelphi.edu/newsevent/long-island-quality-of-life-lagging/

Large undocumented population have housing problem. Also, small but significant population of community with behavioral problems also have housing access problem. - Other Health Professional

The Incarcerated Population

People in prisons and jails often have complex and costly health care needs. Many are uninsured. Among individuals involved with the criminal justice system, many have mental illness, substance use disorders, infectious disease, and chronic health conditions that are as much as seven times higher than rates in the general population.[83] According to the SCDHS:

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. (Suffolk County Community Health Assessment 2014-2017)

Medicaid Members and the Uninsured

Suffolk County has approximately 239,356 Medicaid members and 147,934 uninsured. Most Medicaid is managed in New York and this is true for Suffolk County –Fidelis, Health First, Affinity, United Healthcare, Neighborhood, HIP (Emblem) are major players in a fragmented MCO landscape. Medicaid members and the uninsured tend to live in lower income areas, with the greatest concentrations in the southwest portion of the County. These regions consistently show poor outcomes medically and unfavorable findings in terms of the social determinants of health.

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[83] Justice Center, The Council Of State Governments, Policy Brief: Opportunities For Criminal Justice Systems To Increase Medicaid Enrollment, December 2013 http://csgjusticecenter.org/wp-content/uploads/2013/12/ACA-Medicaid-Expansion-Policy-Brief.pdf

Geographic Concentrations in Western, Central and Eastern Suffolk
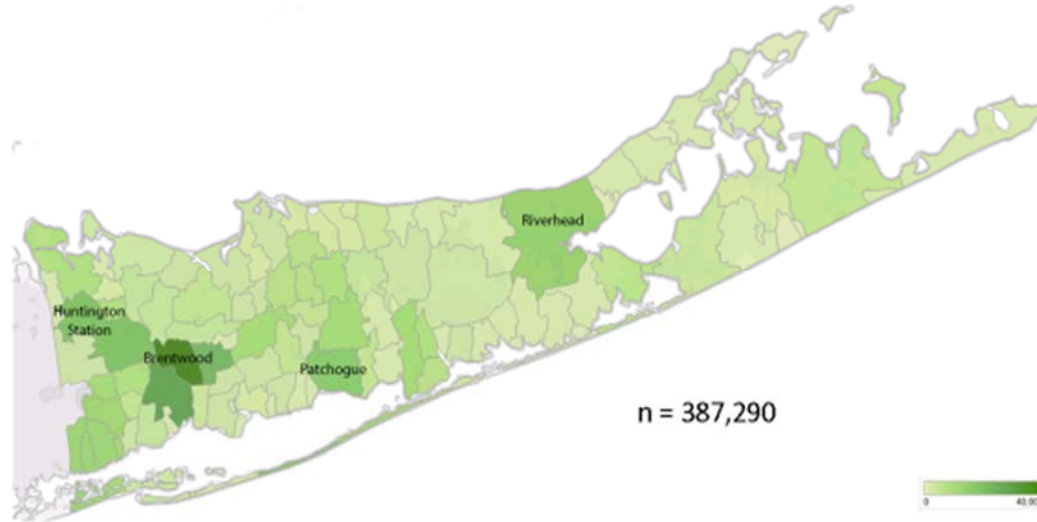
n = 387,290

Medicaid Members Data from DSRIP 2012; Uninsured data from ACS 2012 5 Year Estimate

Stony Brook Medicine

The zip codes with the ten highest numbers of Medicaid beneficiaries are shown below. [84]

Zip Code	Submarket	Area Name	DSRIP 2013 Total Medicaid Beneficiaries
11717	Southwest	Brentwood	26,992
11706	Southwest	Bay Shore, Kismet, Fair Harbor	19,132
11722	Southwest	Central Islip	14,266
11746	Northwest	Huntington Station	12,654
11772	Central South	Patchogue	10,088
11701	Southwest	Amityville	8,541
11901	East	Riverhead	7,999
11704	Southwest	West Babylon	7,408
11798	Southwest	Wheatley Heights, Wyandanch	7,215
11757	Southwest	Lindenhurst	7,121

The demographic profile of Medicaid members and the uninsured differs from that of the County at large. Thirty-six percent of Medicaid members are Hispanic, 33% are white, 17% are Black, 8% are other, 6% are Asian, and .5% are Native American.[85] The Medicaid population contains more children and adults over age

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[84] https://health.data.ny.gov/Health/Medicaid-Beneficiaries-Inpatient-Admissions-and-Em/m2wt-pje4

[85] PRC Population Survey

65, whereas the uninsured are predominantly aged 18-64. Females dominate the Medicaid population, whereas males make up most of those without health insurance.[86]

Among the 10% of the Suffolk population who lack health insurance, there are also disproportionate numbers of racial and ethnic minorities. According to the SCDHS:

> *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 is uninsured. 11.8% of adult whites, 17.2% of African Americans/Blacks, and 36.1% of Hispanics/Latinos are uninsured. 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.[87]*

From 2008-2012, eleven communities in Suffolk County had uninsured rates in excess of 20%: Flanders (38.7%), Shinnecock Hills (30.9%), East Hampton (26.2%), Brentwood (25.4%), Central Islip (23.8%), Gordon Heights (22%), Noyack (22%), Riverhead (21.9%), Wyandanch (21.2%), Aquebogue (20.7%), and Springs (20%). Such communities are scattered throughout the County. These and other underserved communities may see rates decrease as more individuals receive coverage through the Affordable Care Act (ACA). However, the ACA does not provide healthcare insurance to undocumented individuals, so these Suffolk residents will remain without coverage.[88]
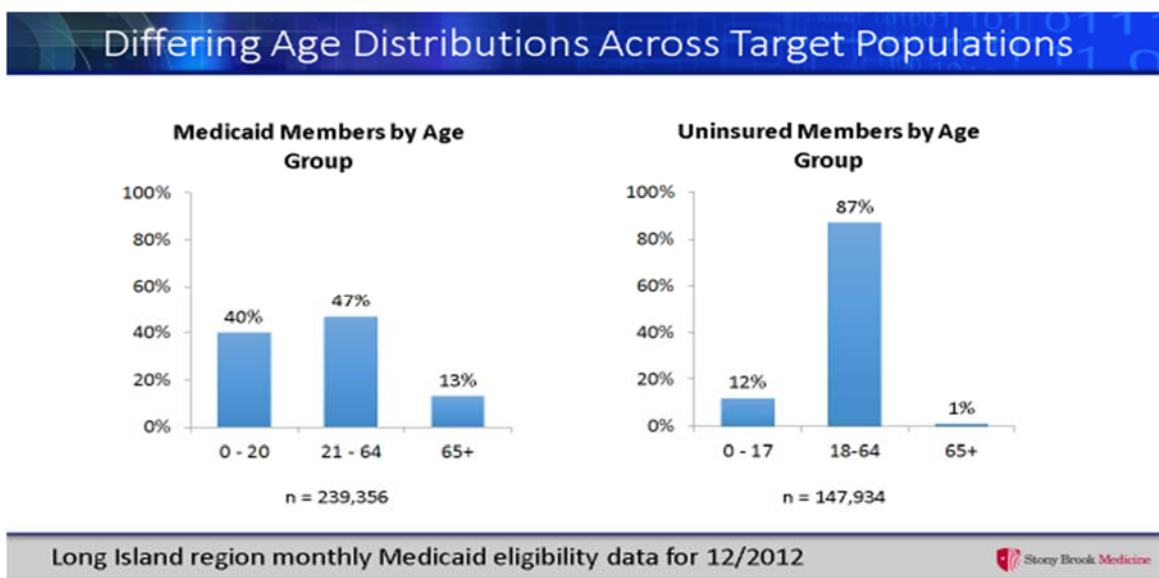
The uninsured have serious problems in accessing affordable care. Sixty-nine percent say that they have trouble accessing medical care and almost 45% have barriers to obtaining prescriptions. Cost is frequently cited as a barrier.[89]

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[86] Long Island Region Monthly Medicaid Eligibility data for 12/2012
[87] Suffolk County Department of Health Services, Community Needs Assessment 2014-2017
[88] Eichberg, S. (2014). Vital Signs 2014—Measuring Long Island's Social Health. Garden City, New York: Adelphi University
[89] PRC Population Survey

Key Informant Input

> *The uninsured have difficulty accessing health care. We were able to access care at the County Health Departments in the past, but this is not working now. - Social Service Provider*

> *The uninsured because they cannot pay for service and this makes it very hard to access. Clients who do not have transportation and live far from public transportation, because they cannot get to the health care location. Clients who do not speak English. - Social Service Provider*

> *Those with managed insurance and the uninsured. They either don't have access or their access is limited, sometimes in a seemingly arbitrary manner by UR persons at insurance companies. - Other Health Professional*

> *The underserved population have a harder time accessing services because the services are not available. If services are available the wait lists are extensive. No insurance coverage or inferior insurance coverage. Lack of knowledge. - Other Health Professional*

ii. HEALTH STATUS

In regard to health status, disparities between the Total and Target populations are evident. In the Total Population, 54.9% of adults rate their overall health as "excellent" or "very good," and another 28.2% gave "good" ratings of their overall health. Only 16.9% of believed that their overall health is "fair" or "poor," a figure that is statistically similar to statewide findings and the national percentage. Adults experiencing "fair" or "poor" overall health were more likely to be age 40 and older and residents living at lower incomes. [90]

In the Target Population, a much lower percentage of adults (27.9%) rate their overall health as "excellent" or "very good." Another 32.8% of the Target Population gave "good" ratings of their overall health. A larger proportion of the Target Population (39.4%) gave "fair/poor" ratings of their overall health. This is more than twice the countywide prevalence. Findings are similar when viewed by the five subareas. Again, adults experiencing "fair" or "poor" overall health were more likely to be age 40 and older and residents living at lower incomes.[91]

**Leading Causes of Death and Premature Death**
In the population overall, cardiovascular disease (heart disease and stroke) and cancers accounted for over one-half of all deaths in Suffolk County in 2011. Other leading causes of death include unintentional injuries and chronic lower respiratory disease (CLRD).

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[90] PRC Population Survey
[91] PRC Population Survey

Leading Causes of Death
(Suffolk County, 2011)
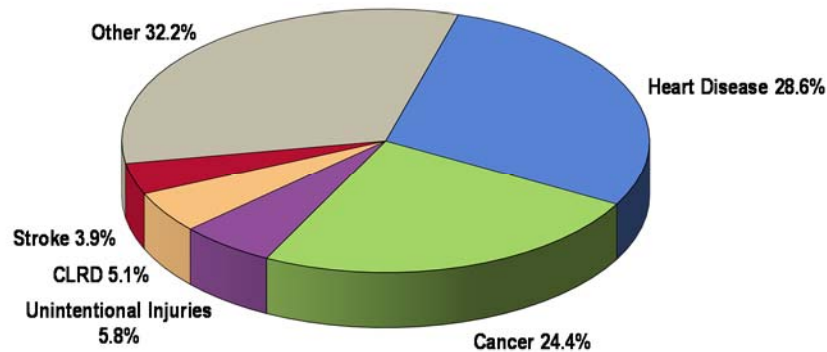
Other 32.2%
Heart Disease 28.6%
Stroke 3.9%
CLRD 5.1%
Unintentional Injuries 5.8%
Cancer 24.4%

Sources: • CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
Notes: • Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
• CLRD is chronic lower respiratory disease.

Age-adjusted mortality rates in Suffolk County are worse than national rates for heart disease, kidney disease, drug-induced deaths, and septicemia. Of the causes outlined in the following chart for which Healthy People 2020 objectives have been established, Suffolk County rates fail to satisfy the related goals for heart disease and drug-induced deaths. The top ten age-adjusted causes of death are diseases of the heart, cancer, stroke, unintentional injuries, chronic lower respiratory disease, kidney disease, septicemia, pneumonia and influenza, drug induced death, and diabetes. [92]

Age-Adjusted Death Rates for Selected Causes
(2009-2011 Deaths per 100,000 Population)

	Suffolk County	NY	US	HP2020
Diseases of the Heart	196.1	202.3	177.6	158.9*
Malignant Neoplasms (Cancers)	167.8	162.6	171.7	160.6
Cerebrovascular Disease (Stroke)	26.5	27.5	38.6	33.8
Unintentional Injuries	37.7	24.8	38.2	36.0
Chronic Lower Respiratory Disease (CLRD)	33.1	31.4	42.3	n/a
Kidney Disease	15.5	10.6	14.6	n/a
Septicemia	15.5	10.2	10.7	n/a
Pneumonia/Influenza	15.2	20.8	15.7	n/a
Drug-Induced	14.6	9.5	13.1	11.3
Diabetes Mellitus	13.0	17.3	21.1	n/a
Motor Vehicle Deaths	10.4	6.3	11.3	12.4
Alzheimer's Disease	9.8	11.2	24.4	20.5*
Intentional Self-Harm (Suicide)	8.2	7.6	12.1	10.2
Cirrhosis/Liver Disease	5.3	6.5	9.4	8.2
Firearm-Related	4.1	5.0	10.1	9.2
HIV/AIDS	3.1	7.0	4.0	3.3
Homicide/Legal Intervention	3.1	7.4	6.0	5.5

Sources: • CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
• US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov.
Note: • Rates are per 100,000 population, age-adjusted to the 2000 US Standard Population and coded using ICD-10 codes.
• *The Healthy People 2020 Heart Disease target is adjusted to account for all diseases of the heart; the Diabetes target is adjusted to reflect only diabetes mellitus-coded deaths.
• Local, state and national data are simple three-year averages.

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[92] PRC Population Survey

While heart disease is the leading cause of death, cancer is the leading cause of premature death. The other main causes are heart disease, unintentional injury, chronic lower respiratory disease, and suicide.[93]

Premature Mortality: Chronic Disease, Injury and Suicide

Leading Causes of Premature Death in Suffolk County

NYSDOH Vital Statistics Data 2012 — Stony Brook Medicine
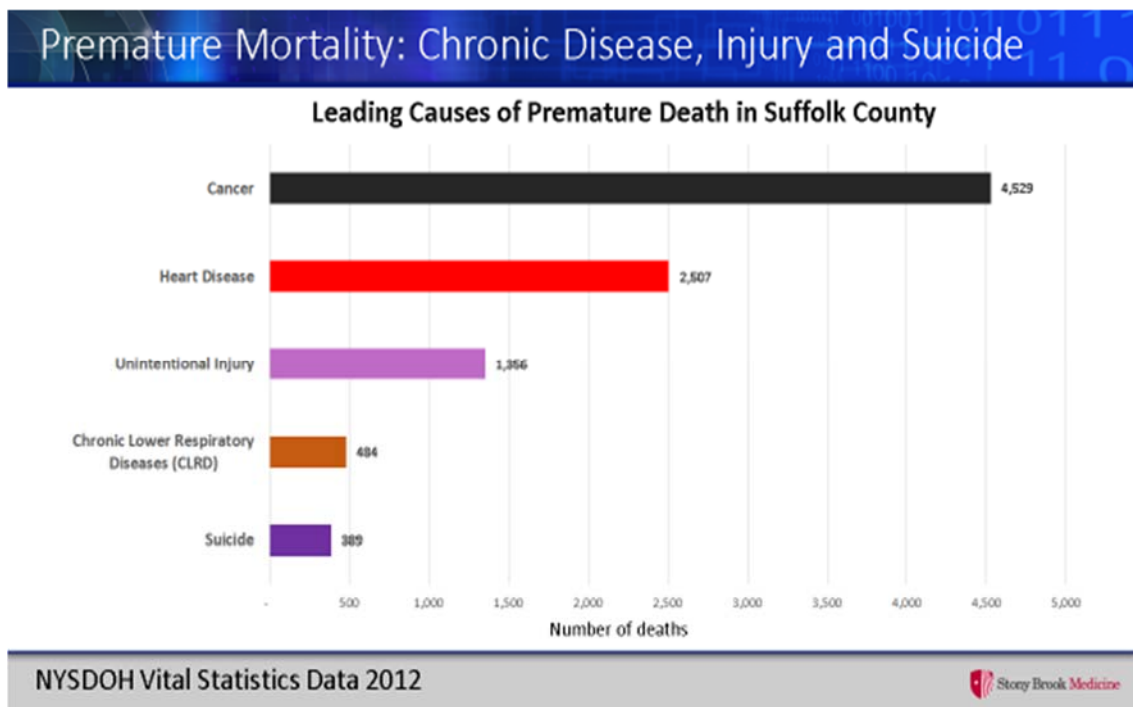
Blacks and whites have a substantially higher total mortality rate that Hispanics, but Blacks and Hispanics have higher rates of premature death than whites. [94]

Health Indicator	Non-Hispanic			Hispanic	Total
	White	Black	Asian/Pacific Islander		
Total Mortality per 100,000, Age-adjusted	685.2	734.6	236.8	440.7	668.7
Percent Premature Deaths (< 75 Years)	36.10%	60.00%		63.30%	39.10%
Years of Potential Life Lost per 100,000, Age-adjusted	5,671	7,333	1,722	4,115	5,458

Chronic diseases represent priority conditions in Suffolk County. According to the Suffolk County Department of Health (SCDHS):

> *Another focus area selected by SCDHS…is increasing access to chronic disease preventive care and management. Managing chronic disease is one of the most significant public health challenges moving*

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[93] New York State Department of Health [DOH]. (2014, March 2014). Leading Causes of Premature Death (Death before age 75), New York State, 2010-2012. Retrieved September 15, 2014 from: https://www.health.ny.gov/statistics/leadingcauses_death/pm_deaths_by_county.htm

[94] https://www.health.ny.gov/statistics/community/minority/County/suffolk.htm

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, 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. (Suffolk County Community Health Assessment 2014-2017)

Leading Causes of Hospitalization – Medicaid Members

Medicaid members collectively had 34,944 hospital discharges in 2012. When one considers both primary and secondary diagnoses, CVD was the most prevalent condition. The rankings of conditions of focus under DSRIP are shown below.[95]

	Primary Dx Discharges	Secondary Dx Discharges	Total Diagnoses	Estimated Diagnosis Prevalence among this Patient Subset
CVD including hypertension	2,300	14,927	17,227	49.3%
Psychiatric disorders	2,431	10,678	13,109	37.5%
Perinatal	6,260	6,043	12,303	35.2%
Substance Use disorders	1,905	5,464	7,369	21.1%
Diabetes	702	6,268	6,970	19.9%
Asthma	683	2,929	3,612	10.3%
Chronic Kidney Disease	346	3,142	3,488	10.0%
Cancer	744	2,722	3,466	9.9%
COPD	598	2,759	3,357	9.6%
HIV	49	331	380	1.1%

Many admissions were considered "short-stay," defined as admissions under 2 days. The need for such admissions is questionable as many could potentially be more efficiently handled through observation. Across all Suffolk hospitals, 9,475 Medicaid admissions, or almost 25% of the total are short stay. The majority of these were at Stony Brook University Hospital, followed by Good Samaritan and Southside Hospitals. Most short stay admissions were for non-specific chest pain, epilepsy, and asthma.[96] Excluding Mather Hospital, the greatest number of PQI admissions are at Good Samaritan Hospital (729), followed by Stony Brook University Hospital (569) and Southside Hospital (505).

Prevention Quality Indicators - Medicaid

Of the total reported Medicaid admissions (34,944), 3,321 were classified as either PQI or PDI admissions. This represents 9.5% of total admissions. Using two-year averages from the Health Data NY, the greatest number

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[95] Inpatient volume estimated from SPARCS 2012 LDS for Medicaid members served in a Suffolk facility; Chronic disease prevalence, unless noted, are from the Chronic Disease Data for 2012 Medicaid Population*; Population size data from NYSDOH
New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk; New York State Department of Health [DOH]. (2014, May). Medicaid Beneficiaries, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Beneficiaries-Inpatient-Admissions-and-Em/m2wt-pje4; (a) Estimated from DSRIP Dashboard for CY 2013)

[96] New York State Department of Health [DOH]. (2014, April). Hospital Inpatient Discharges (SPARCS Limited Data Set): 2012.

of annual PQI admissions was from COPD/asthma (706), followed by Heart Failure (481), and pneumonia (473).[97]

Among Medicaid member adults in 2011-2012 (two years), Suffolk generally performs unfavorably in relation to statewide rates. For the Adult Composite rates, Suffolk rates exceed statewide rates on the Overall (1.14), Acute (1.22), Chronic (1.09), Diabetes (1.15), and Respiratory (1.16) PQIs. The Suffolk County rate for the Adult Circulatory Composite falls below the statewide rate (.96). For the individual Adult PQIs, Suffolk rates exceed statewide rates for Diabetes Short Term Complications (1.06), Diabetes Long Term Complications (1.19), Uncontrolled Diabetes (1.33), COPD and Asthma (1.20), Dehydration (1.16), Bacterial Pneumonia (1.18), UTI (1.3), and Angina without Procedure (1.22). Suffolk rates were favorable in relation to statewide rates related only to Hypertension (.99), Heart Failure (.92), Asthma in Younger Adults (.93), and Lower-Extremity Amputation Among Patients with Diabetes (.94). Related to PDIs, Suffolk County rates are generally more favorable than statewide rates, though with some exceptions. On the PDI composites for 2011-2012, Suffolk rates fall below statewide rates for the Overall (.88), Acute (.88), and Chronic (.87) Conditions. For the individual PDIs, Suffolk performs favorably in relation to the state for asthma (.63) and Gastroenteritis (.82), and unfavorably related to Diabetes Short Term Complications (1.61), and UTI (1.33).[98]

As would be expected, PQI rates vary somewhat from year to year. The most recent annual data for Medicaid members (2012) is shown in the following table.

[97] Office of Quality and Patient Safety, 2014 Created by Office of Health Systems Management, NYSDOH
https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/performance_data/docs/chartbook1_avoidable_hospitalization_long_island.pdf
[98] Office of Quality and Patient Safety, 2014 Office of Health Systems Management, NYSDOH

Medicaid PQI/PDI 2012

PQI Number	PQI Name	Medicaid PQI Hospitalizations	Observed Rate per 100 000 people	Expected PQI Hospitalizations	Expected Rate per 100 000 people	Risk Adjusted Rate per 100 000 people	Observed Hospitalizations / Expected Hospitalizations	Greater than 1
PQI_01	Diabetes Short-term Complications	181	116.1	182.0	116.8	115.7	0.994	FALSE
PQI_03	Diabetes Long-term Complications	332	213.0	286.0	183.5	227.0	1.161	TRUE
PQI_05	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults	719	857.6	641.5	765.2	873.2	1.121	TRUE
PQI_07	Hypertension	123	78.9	139.8	89.7	89.5	0.880	FALSE
PQI_08	Heart Failure	375	240.6	420.5	269.8	251.1	0.892	FALSE
PQI_10	Dehydration	196	125.7	163.5	104.9	122.5	1.199	TRUE
PQI_11	Bacterial Pneumonia	467	299.6	403.3	258.7	279.5	1.158	TRUE
PQI_12	Urinary Tract Infection	422	270.7	318.7	204.4	246.7	1.324	TRUE
PQI_13	Angina Without Procedure	44	28.2	35.7	22.9	30.4	1.232	TRUE
PQI_14	Uncontrolled Diabetes	97	62.2	62.0	39.8	67.8	1.565	TRUE
PQI_15	Asthma in Younger Adults	101	140.2	102.6	142.4	132.8	0.985	FALSE
PQI_16	Lower-Extremity Amputation among Patients with Diabetes	30	19.2	26.9	17.3	20.1	1.116	TRUE
PQI_90	Prevention Quality Overall Composite	3,070	1969.3	2769.8	1776.7	1977.4	1.108	TRUE
PQI_91	Prevention Quality Acute Composite	1,085	696.0	885.6	568.1	649.3	1.225	TRUE

PQI Number	PQI Name	Medicaid PQI Hospitalizations	Observed Rate per 100 000 people	Expected PQI Hospitalizations	Expected Rate per 100 000 people	Risk Adjusted Rate per 100 000 people	Observed Hospitalizations / Expected Hospitalizations	Greater than 1
PQI_92	Prevention Quality Chronic Composite	1,985	1273.3	1884.4	1208.8	1321.2	1.053	TRUE
PQI_S01	Prevention Quality All Diabetes Composite	623	399.6	544.3	349.2	417.4	1.145	TRUE
PQI_S02	Prevention Quality All Circulatory Composite	542	347.7	596.0	382.3	370.9	0.909	FALSE
PQI_S03	Prevention Quality All Respiratory Composite	820	526.0	744.1	477.3	530.8	1.102	TRUE
PDI_14	Asthma	167	237.81	251.12	357.6	213.2	0.665	FALSE
PDI_15	Diabetes Short-term Complications	26	55.72	15.23	32.64	55.49	1.707	TRUE
PDI_16	Gastroenteritis	83	99.62	123.2	147.87	80.6	0.674	FALSE
PDI_18	Urinary Tract Infection	54	64.81	49.77	59.73	51.69	1.085	TRUE
PDI_90	Pediatric Quality Overall Composite	138	295.73	160.51	343.97	277.56	0.860	FALSE
PDI_91	Pediatric Quality Acute Composite	27	57.86	37.91	81.24	53.07	0.712	FALSE
PDI_92	Pediatric Quality Chronic Composite	111	237.87	122.6	262.73	224.83	0.905	FALSE

Sources:
New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from:
https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn

New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from:
https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

Emergency Department Utilization and Preventable Emergency Department Visits (PPVs)

ED utilization is disproportionately high among Medicaid members and the uninsured. In total (including both ED visits resulting in an admission and those not resulting in an admission), there were 206,519 ED visits at Suffolk Hospitals across these two populations. Medicaid members and the uninsured make up approximately 26% of the County's population, but they contribute 37% of the total ED visits. The uninsured, who make up approximately 10% of the County population, contribute about 16% of ED visits. Across all Suffolk hospitals, the highest number of visits from Medicaid and uninsured are at Good Samaritan Hospital, followed by Stony Brook University Hospital and Mather Hospital.

Facility Name	Self-pay
Brookhaven Memorial Hospital Medical Center	10,324
Eastern Long Island Hospital	893
Good Samaritan Hospital Medical Center	13,061
Huntington Hospital	6,233
John T Mather Memorial Hospital of Port Jefferson New York	15,793
Peconic Bay Medical Center	4,388
Southampton Hospital	818
Southside Hospital	12,031
St Catherine of Siena Hospital	3,096
St Charles Hospital	1,937
University Hospital	18,553
Total Uninsured Visits[99]	**87,127**
Total Medicaid Visits[100]	**119,392**
Total Uninsured and Medicaid Visits	**206,519**
Total Suffolk County ED visits – all payers[101]	**560,090**

The primary drivers of ED visits are behavioral health issues, cardiac conditions, asthma and diabetes.[102] The highest volumes of ED visits are from residents of Brentwood, Bay Shore (both in the Southwest), Riverhead (East), and Patchogue (Central South).[103]

The problem of excess ED use may be exacerbated by a lack of outpatient behavioral health resources for patients being discharged from the hospital. According to OMH BHO data for the Long Island region[104]:
- 48.1% of mental health discharges receive an outpatient visit within 30 days;
- 38.3% of substance use disorder discharges receive an appointment within 30 days;

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[99] New York State Department of Health [DOH]. (2014, April). Outpatient Visits (SPARCS Limited Data Set): 2012.
[100] Ibid
[101] Nassau Suffolk Hospital Council, Hospital Statistics And Service Utilization Report YTD For Month Ending December 31, 2012
[102] New York State Department of Health [DOH]. (2014, May). Medicaid Chronic Conditions, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Chronic-Conditions-Inpatient-Admissions-a/2yck-xisk
[103] New York State Department of Health [DOH]. (2014, May). Medicaid Beneficiaries, Inpatient Admissions and Emergency Room Visits by Zip Code: Beginning 2012. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Beneficiaries-Inpatient-Admissions-and-Em/m2wt-pje4
[104] News from the Field: New York State Office of Mental Health Long Island Field Office. Sullivan, Ann Marie; Carlin, Martha. Edition: Summer 2014.

- 65.2% of those discharged from a hospital filled a written prescription for psychotropic medications within 30 days;
- 50-60% of those with medical healthcare needs at discharge have a medical appointment within 45 days;
- 20.4% of hospital discharges were readmitted within 30 days; and
- 31.6% of hospital discharges were readmitted within 90 days.

Asthma is also a frequent cause of ED visits. In 2012, 6,879 Medicaid members, or just over 50%, were seen in the ED, generating a total of 18,786 visits. There are almost three times as many ED visits as there are members with asthma who visit the ED, demonstrating multiple visits for some individuals. It is not possible to tell whether a small number of members return many times or whether there is a more even distribution of visits across the affected population. Asthma in children is the leading cause of avoidable admission.[105]

In 2012, Suffolk County performed slightly better than NYS in regard to PPVs at 36/100 Medicaid members. However, of the total PPVs of 86,435 comprised more than 70% of the total ED visits among Medicaid members.

Medicaid Avoidable ED visits (PPV) Rate per 100 members
Suffolk County is performing slightly better than the state average on Potentially Preventable Emergency Department visits (PPV)
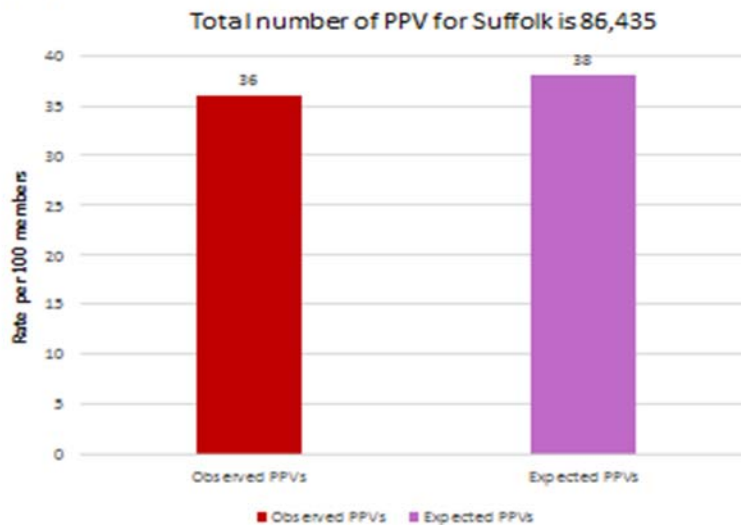
Total number of PPV for Suffolk is 86,435

New York State Department of Health [DOH]. (2014, July). Medicaid Potentially Preventable Emergency Visit (PPV) 2012 Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011 . Retrieved July 15, 2014 from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7s-34ka

Potentially Preventable Readmissions (PPR)
A PPR is a readmission (return hospitalization within the specified readmission time interval) that is clinically-related to the initial hospital admission. They were developed by 3M and have been found to be related to quality of care at the initial admission as well as other factors such as availability of primary care, distance to the hospital, ethnicity, income, and type of insurance.

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[105] New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

PPRs are often measured as readmission chains. A readmission chain is a sequence of clinically-related admissions as defined by 3M. PPR rates vary substantially between hospitals in Suffolk County. Observed rates range from 12.71 at ELIH to 3.13 at SHH of "at-risk" admissions. The statewide observed rate is 6.73. When risk-adjusted, four out of the 11 Suffolk hospitals have PPR rates above their expected values. This indicates a need for greater clinical integration and adherence to evidence-based practice standards as well as improvements in transitional care services.
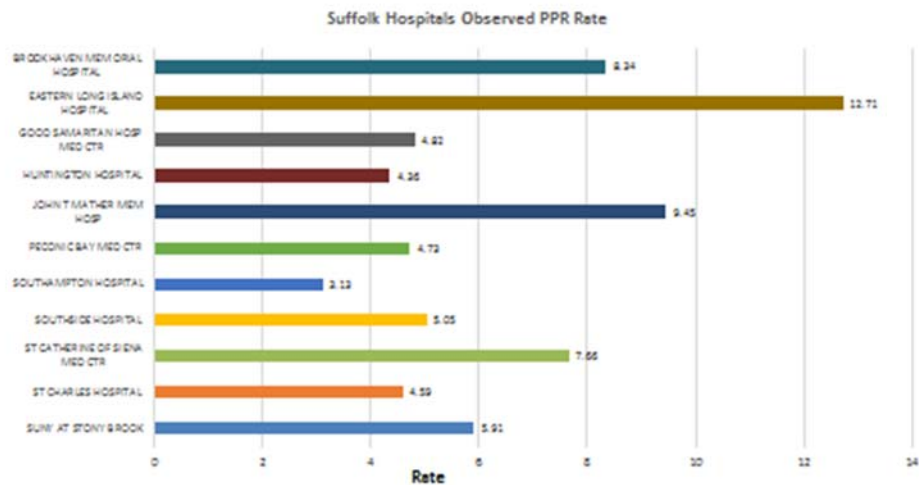
Suffolk Hospitals Observed PPR Rate

Hospital	Rate
BROOKHAVEN MEMORIAL HOSPITAL	8.34
EASTERN LONG ISLAND HOSPITAL	12.71
GOOD SAMARITAN HOSP MED CTR	4.92
HUNTINGTON HOSPITAL	4.36
JOHN T MATHER MEM HOSP	9.45
PECONIC BAY MED CTR	4.72
SOUTHAMPTON HOSPITAL	3.13
SOUTHSIDE HOSPITAL	5.05
ST CATHERINE OF SIENA MED CTR	7.66
ST CHARLES HOSPITAL	4.59
SUNY AT STONY BROOK	5.91

PPRs calculated based on 2012 Medicaid Admissions

New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011. Retrieved July 1, 2014 from:
https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn

Total Number of Readmission Chains by Suffolk County Hospital: A readmission chain is a sequence of clinically-related admissions as defined by 3M. Suffolk County Hospitals differ greatly in observed PPR chains.

Suffolk Hospitals Assigned PPR Chains
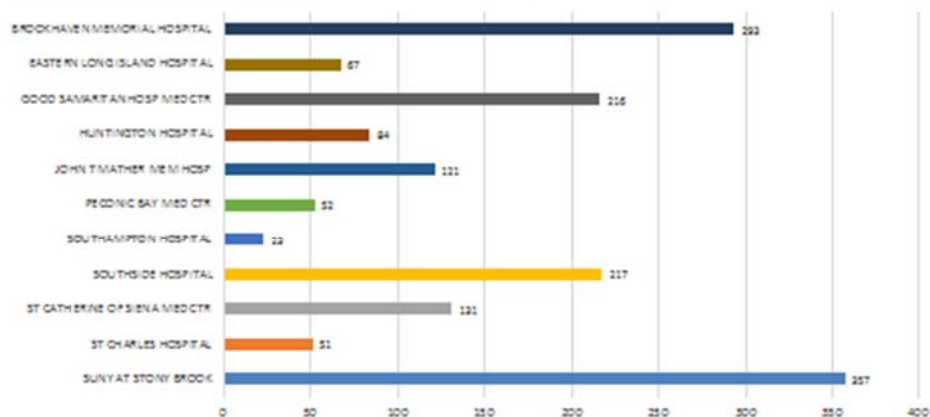
Hospital	Chains
BROOKHAVEN MEMORIAL HOSPITAL	293
EASTERN LONG ISLAND HOSPITAL	67
GOOD SAMARITAN HOSP MED CTR	216
HUNTINGTON HOSPITAL	84
JOHN T MATHER MEM HOSP	121
PECONIC BAY MED CTR	52
SOUTHAMPTON HOSPITAL	23
SOUTHSIDE HOSPITAL	217
ST CATHERINE OF SIENA MED CTR	131
ST CHARLES HOSPITAL	51
SUNY AT STONY BROOK	357

PPRs calculated based on 2012 Medicaid Admissions

New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011. Retrieved July 1, 2014 from:
https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn

While the timing of readmissions across the participating hospitals is not available, data from Stony Brook University Hospital indicates that more than one-third of readmissions occur in week one post discharge. More than half occur in the first two weeks.

Cardiovascular Disease - Findings from the PRC Population and Key Informant Surveys

Heart disease is the leading cause of death in the United States, with stroke following as the third leading cause. Together, heart disease and stroke are among the most widespread and costly health problems facing the nation today, accounting for more than $500 billion in healthcare expenditures and related expenses in 2010 alone. Fortunately, they are also among the most preventable.

The leading modifiable (controllable) risk factors for heart disease and stroke are: high blood pressure, high cholesterol, cigarette smoking, diabetes, poor diet and physical inactivity, and overweight and obesity. The risk of Americans developing and dying from cardiovascular disease would be substantially reduced if major improvements were made across the US population in diet and physical activity, control of high blood pressure and cholesterol, smoking cessation, and appropriate aspirin use.

The burden of cardiovascular disease is disproportionately distributed across the population. There are significant disparities in prevalence of risk factors, access to treatment, appropriate and timely treatment, treatment outcomes, and mortality based on gender, age, race/ethnicity, geographic area, and socioeconomic status.

> *Disease does not occur in isolation, and cardiovascular disease is no exception. Cardiovascular health is significantly influenced by the physical, social, and political environment, including: maternal and child health; access to educational opportunities; availability of healthy foods, physical education, and extracurricular activities in schools; opportunities for physical activity, including access to safe and walkable communities; access to healthy foods; quality of working conditions and worksite health; availability of community support and resources; and access to affordable, quality healthcare.*
>
> – *Healthy People 2020 (www.healthypeople.gov)*

Mortality
Between 2009 and 2011, there was an annual average age-adjusted heart disease mortality rate of 196.1 deaths per 100,000 in Suffolk County. This was comparable to the statewide rate and less favorable than the national rate. This fails to satisfy the Healthy People 2020 target of 158.9 (as adjusted to account for all diseases of the heart). Between 2009 and 2011, there was an annual average age-adjusted stroke mortality rate of 26.5 deaths per 100,000 in Suffolk County. This is comparable to the statewide rate and more favorable than the national rate. It satisfies the Healthy People 2020 target of 33.8 or lower.

Prevalence of Heart Disease
A total of 6.2% of Suffolk County Total Population surveyed adults report that they suffer from or have been diagnosed with heart disease, such as coronary heart disease, angina or heart attack. This is similar to the national prevalence. In the Target Population, 9.6% of adults report that they suffer from or have been diagnosed with heart disease. This is statistically similar to the County prevalence. The findings by submarket are also statistically similar. However, the rate is particularly high in the Central North (16.2%) and is as high as (14.1%) in the Central South.

Prevalence of Heart Disease

Total Population: Suffolk County 6.2%, US 6.1%

Suffolk County Target (Medicaid/Self-Pay) Population: Northwest 7.0%, Southwest 7.0%, Central South 14.1%, Central North 16.2%, East 8.2%, Overall 9.6%

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 127]
 • 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.
 • Includes diagnoses of heart attack, angina or coronary heart disease.

Heart disease is considerably higher in the Medicare and Medicaid populations. In the Target Population, adults more likely to have been diagnosed with chronic heart disease include: men, residents age 40 to 64, those with lower incomes, and Non-Hispanics. It is also much more common among Medicaid members (15.6%) versus the self-pay population (1.0%).

Prevalence of Heart Disease
(By Insurance Type, Suffolk County 2014)

Total Population: Medicare 17.8%, Private Insurance 0.7%

Target (Medicaid/Self-Pay) Population: Self-Pay 1.0%, Medicaid 15.6%

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 127]
Notes: • Asked of all respondents.
 • Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
 • Includes diagnoses of heart attack, angina or coronary heart disease.

Prevalence of Stroke

A total of 3.6% of surveyed Suffolk County Total Population adults report that they suffer from or have been diagnosed with cerebrovascular disease (a stroke). This is similar to both statewide and national findings. In the Target Population, 4.0% of surveyed adults suffer from or have been diagnosed with a

stroke. This is similar to the County as a whole and the submarkets do not show significant differences.

Prevalence of Stroke

Total Population: Suffolk County 3.6%, NY 2.6%, US 3.9%

Suffolk County Target (Medicaid/Self-Pay) Population: Northwest 5.0%, Southwest 3.0%, Central South 7.1%, Central North 4.0%, East 3.0%, Overall 4.0%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 37]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.

Notes:
- Asked of all respondents.

As might be expected, Medicare recipients report the highest prevalence of stroke. In the Total Population, Non-Hispanics are more likely to have been diagnosed with stroke. Among Target Population respondents, stroke is more prevalent among those age 40 to 64 and Non-Hispanics.

Prevalence of Stroke
(By Insurance Type, Suffolk County 2014)

Total Population: Medicare 7.7%, Private Insurance 1.0%
Target (Medicaid/Self-Pay) Population: Self-Pay 3.7%, Medicaid 4.3%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 37]

Notes:
- Asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Controlling risk factors for heart disease and stroke remains a challenge. High blood pressure and cholesterol are still major contributors to the national epidemic of cardiovascular disease. High blood pressure affects approximately 1 in 3 adults in the United States, and more than half of Americans with high blood pressure do not have it under control. High sodium intake is a known risk factor for high blood

pressure and heart disease, yet about 90% of American adults exceed their recommendation for sodium intake.

Hypertension is a major risk factor. A total of 98.8% of Suffolk County Total Population adults have had their blood pressure tested within the past two years. This is higher than national findings, and satisfies the Healthy People 2020 target (94.9% or higher). In the Target Population, 95.6% of adults have had their blood pressure tested within the past two years. This is lower than countywide findings and similar by submarket.

Have Had Blood Pressure Checked in the Past Two Years
Healthy People 2020 Target = 92.6% or Higher

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 46]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-4]

Notes:
- Asked of all respondents.

Viewed by insurance coverage, hypertension screenings are lowest among the uninsured. In this group, only 91.7% of respondents indicated that they had had their blood pressure checked in the last two years, whereas among Medicaid members, the percentage was higher at 98.3%.

Prevalence of Hypertension
A total of 32.5% of Suffolk County Total Population adults have been told at some point that their blood pressure was high. This is similar to the New York and national prevalence. It fails to satisfy the Healthy People 2020 target (26.9% or lower). Among hypertensive adults, 80.1% have been diagnosed with high blood pressure more than once. In the Target Population, 32.1% of adults have been diagnosed with hypertension. This is similar to the Suffolk County Total Population prevalence, with no statistically significant differences by subarea. Among hypertensive adults in the Target Population, 77.8% have been diagnosed with high blood pressure more than once. However, viewed by health coverage, Medicare and Medicaid recipients are more likely to be hypertensive.

Prevalence of High Blood Pressure
Healthy People 2020 Target = 26.9% or Lower

■ Total Population

Diagnosed More Than Once = 80.1%

Suffolk County	NY	US
32.5%	30.7%	34.1%

□ Suffolk County Target (Medicaid/Self-Pay) Population

Diagnosed More Than Once = 77.8%

Northwest	Southwest	Central South	Central North	East	Overall
32.0%	31.3%	32.0%	34.0%	32.7%	32.1%
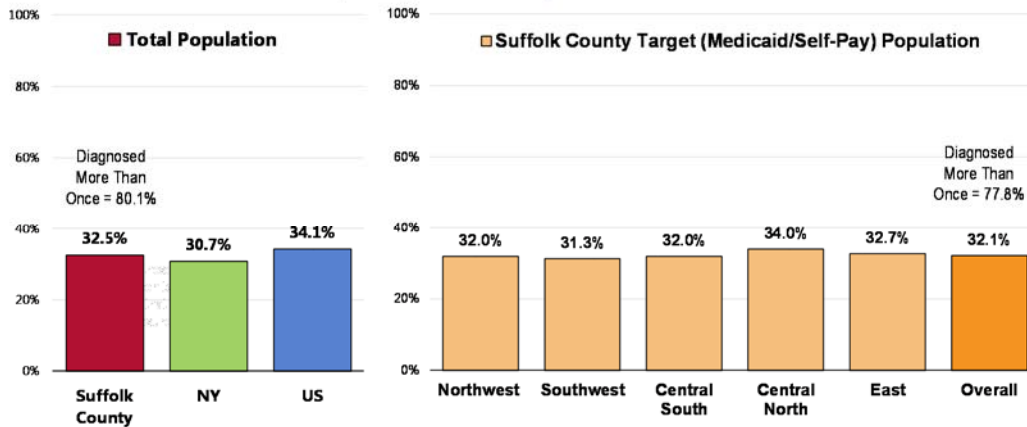
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Items 44, 128]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-5.1]

Notes:
- Asked of all respondents.

Prevalence of High Blood Pressure
(By Insurance Type, Suffolk County 2014)
Healthy People 2020 Target = 26.9% or Lower

■ Total Population   **Target (Medicaid/Self-Pay) Population**

Medicare	Private Insurance	Self-Pay	Medicaid
32.3%	23.1%	20.1%	40.2%
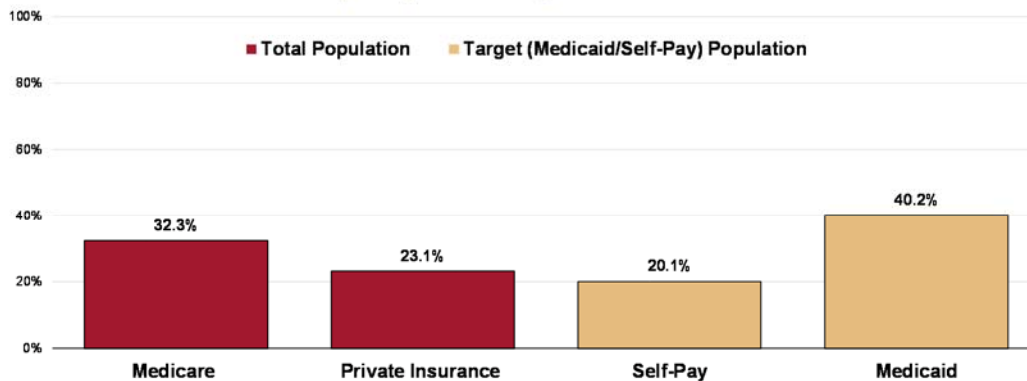
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 128]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HDS-4]

Notes:
- Asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

In the Total Population, hypertension is more common among adults age 40 and older, and especially those age 65+, as well as residents with higher incomes. In the Target Population, prevalence is higher among residents age 40 to 64, those in the lower income breakout, and whites.

Hypertension and Cholesterol Management
Among Suffolk County Total Population respondents who have been told that their blood pressure was high, 92.6% report that they are currently taking actions to control their condition. This is similar to the US findings among hypertensive adults. The proportion of hypertensive people taking action to control their cholesterol is also lower in the Target Population.

Taking Action to Control Hypertension
(Among Adults With High Blood Pressure)

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 45]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents who have been diagnosed with high blood pressure.
• In this case, the term "action" refers to medication, change in diet, and/or exercise.

Individual level risk factors which put people at increased risk for cardiovascular diseases include not only high blood pressure and cholesterol, but also tobacco use, physical inactivity, poor nutrition, overweight/obesity, and diabetes. (National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention).

Total Cardiovascular Risk
A total of 83.4% of Suffolk County Total Population adults report one or more cardiovascular risk factors, such as being overweight, smoking cigarettes, being physically inactive, or having high blood pressure or cholesterol. This is similar to national findings. In the Target Population, 89.6% of adults report one or more cardiovascular risk factors. This is notably higher than countywide findings, and favorably low in the Northwest.

Present One or More Cardiovascular Risks or Behaviors

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 130]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.
• Cardiovascular risk is defined as exhibiting one or more of the following: 1) no leisure-time physical activity; 2) regular/occasional cigarette smoking; 3) hypertension; 4) high blood cholesterol; and/or 5) being overweight/obese.
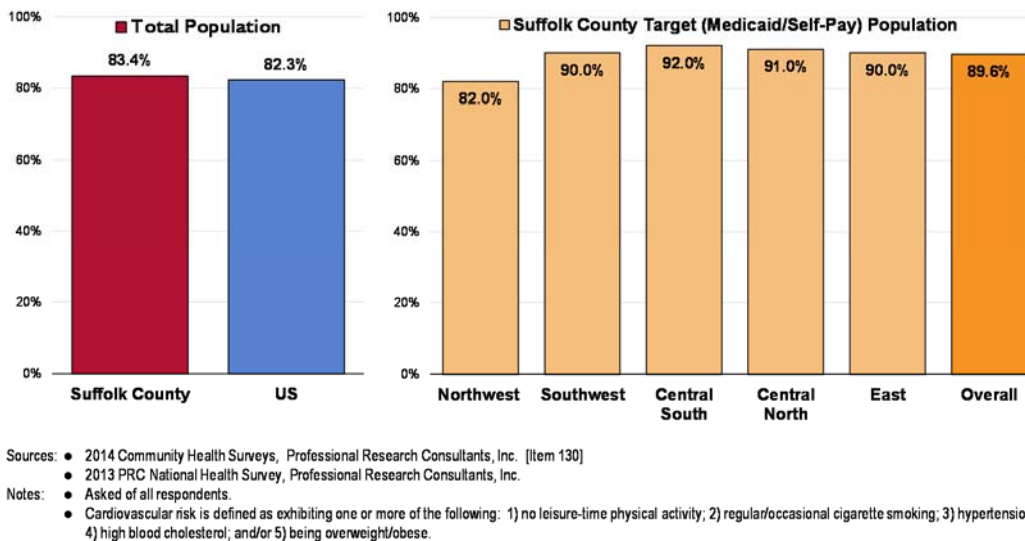
The prevalence of cardiovascular risk factors is highest in the Medicare population; the self-pay and Medicaid prevalence are both higher than that reported in the privately insured segment.

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Present One or More Cardiovascular Risks or Behaviors
(By Insurance Type, Suffolk County 2014)

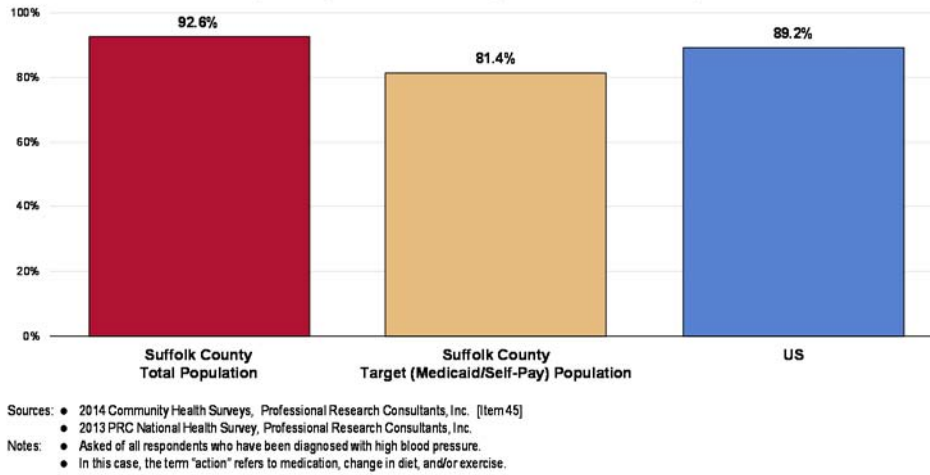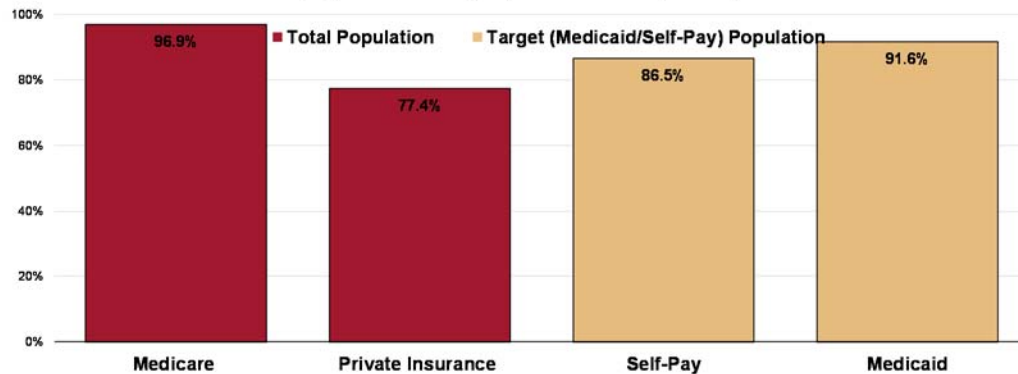Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 130]
Notes: • Asked of all respondents.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
• Cardiovascular risk is defined as exhibiting one or more of the following: 1) no leisure-time physical activity; 2) regular/occasional cigarette smoking; 3) hypertension; 4) high blood cholesterol; and/or 5) being overweight/obese.

In the Suffolk County Total Population, the prevalence of cardiovascular risk factors is highest among men, adults age 40 and older (positive correlation with age), and Hispanics. In the Target Population, the prevalence is highest in men and the 40-to-64 age breakout.

Key Informant Input
Over one-third (36.9%) of Key Informants taking part in an online survey characterized *Heart Disease & Stroke* as a "major problem" in the Target Population. A larger proportion (42.9%) characterized this as a "moderate problem."

Perceptions of Heart Disease and Stroke
as a Problem in the Community for the Target Population
(Key Informants, 2014)
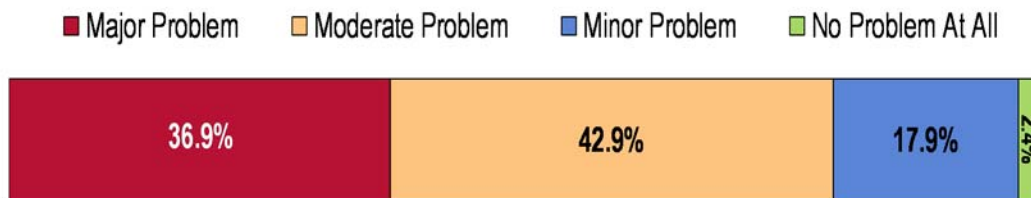
Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Comments included:

> *Heart disease, including but not limited to stroke, is a major health threat on LI due to the burden of cardiac disease and major risk factors. High blood pressure, overweight, obesity, smoking, to name a few. - Public Health Professional*

> *The prevalence of smoking, obesity, high blood pressure and physical and emotional stress is significant in our community. All contributors to heart disease and risk factors for stroke. Our*

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community is in poor physical condition, has little access to proper nutrition. Is very inactive and has little awareness of their health and proper self-care. - Other Health Professional

This starts with poor access to screening and prevention services. When the disease is present there is less than ideal follow up, and people need to be educated on lifestyle changes and management of the disease. There are not enough community based services to accomplish this. Many of the clinics are overcrowded and the wait times are horrendous. - Other Health Provider

People don't access primary care, which means that they are not taking the proactive measures or starting the preventative medications that could reduce the probability of stroke or heart disease. - Other Health Professional

High volume and high risk population for 30 day hospital readmissions. High disease burden for patients and family caregivers. Lack of knowledge and self-confidence in self-management responsibilities. Inadequate family caregiver education and support. Inadequate community collaboration in prevention and support. Lack of collaborative clinical protocols to promote standardized best practice across health care settings. Timely physician follow-up appointments. Medication reconciliation issues. Standardized anti-coagulant monitoring, education and

A total of 26.5% of Key Informants characterized *Congestive Heart Failure* as a "major problem" in the Target Population (43.4% gave "moderate problem" comments).

Perceptions of Congestive Heart Failure as a Problem in the Community for the Target Population
(Key Informants, 2014)
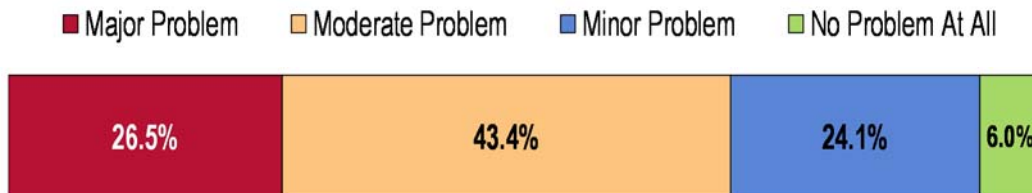
■ Major Problem	□ Moderate Problem	■ Minor Problem	□ No Problem At All

26.5%	43.4%	24.1%	6.0%

Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Comments included:

Access to coordinated and comprehensive care for people with CHF and other related conditions is lacking. Most people in my community have CHF and five other chronic or advanced conditions making it difficult to manage the CHF successfully. Often management is left to episodic crisis intervention with frequent ED visits and subsequent hospitalizations and very high readmission rate. Additionally, the total patient is ignored. Why aren't meds being filled - cost, compliance, confusion...Lack of home based services a big problem in the management of CHF. True med reconciliation happens in the patient's bathroom when we actually look at what meds the patient is really taking. The plethora of paperwork patients get upon hospital discharge, disorganized medication instructions and lack of at home follow up create a system of recurrent admissions to the hospital for chronic advanced heart failure. - Physician

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Complex illness that contributes significantly to disability and impairs quality of life. Requires lifestyle modification, both specialty and primary care, medication compliance, and self-management. - Public Health Professional

As with other illnesses, there is a high prevalence of congestive heart failure in our community because individuals have had limited opportunity and/or willingness to engage in activities associated with a healthy lifestyle. Factors such as obesity, smoking, lack of exercise, etc. are highly associated with this population. Combined with uncoordinated and episodic care, this leads to poor outcomes. - Social Service Provider

Dietary concerns with increased salt intake leading to cardiac disease and heart failure. Lack of knowledge re causes of heart failure and steps to take for prevention. Poor medication compliance. - Other Health Professional

Due to the fact that many elderly residents never have seen a doctor until it's too late and many are overweight, without any education. - Other Health Professional

Mental Health -- Findings from the PRC Population and Key Informant Surveys

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with challenges. Mental health is essential to personal well-being, family and interpersonal relationships, and the ability to contribute to community or society. Mental disorders are health conditions that are characterized by alterations in thinking, mood, and/or behavior that are associated with distress and/or impaired functioning. Mental disorders contribute to a host of problems that may include disability, pain, or death. Mental illness is the term that refers collectively to all diagnosable mental disorders.

Mental disorders are among the most common causes of disability. The resulting disease burden of mental illness is among the highest of all diseases. According to the national Institute of Mental Health (NIMH), in any given year, an estimated 13 million American adults (approximately 1 in 17) have a seriously debilitating mental illness. Mental health disorders are the leading cause of disability in the United States and Canada, accounting for 25% of all years of life lost to disability and premature mortality. Moreover, suicide is the 11th leading cause of death in the United States, accounting for the deaths of approximately 30,000 Americans each year.

Mental health and physical health are closely connected. Mental health plays a major role in people's ability to maintain good physical health. Mental illnesses, such as depression and anxiety, affect people's ability to participate in health-promoting behaviors. In turn, problems with physical health, such as chronic diseases, can have a serious impact on mental health and decrease a person's ability to participate in treatment and recovery.
   -Healthy People 2020 (www.healthypeople.gov)

Self-Reported Mental Health Status
A total of 63.9% of Suffolk County Total Population adults rate their overall mental health as "excellent" or "very good." Another 23.6% gave "good" ratings of their own mental health status. In the Target Population, 42.5% of Suffolk County adults gave "excellent/very good" ratings of their mental health. Another 31.6% gave "good" ratings of their own mental health status.

Self-Reported Mental Health Status
(Suffolk County, 2014)

Total Population, Adults 18+

- Very Good 29.2%
- Good 23.6%
- Fair 7.9%
- Poor 4.6%
- Excellent 34.7%

Target (Medicaid/Self-Pay) Population

- Good 31.6%
- Fair 17.1%
- Poor 8.8%
- Excellent 17.9%
- Very Good 24.6%

A total of 12.5% of Suffolk County Total Population adults, however, believe that their overall mental health is "fair" or "poor." This is similar to the "fair/poor" response reported nationally. In the Target Population, 25.9% gave low ratings of their overall mental health. This is twice the "fair/poor" response reported countywide and statistically similar by subarea.

Self-Reported Mental Health Status
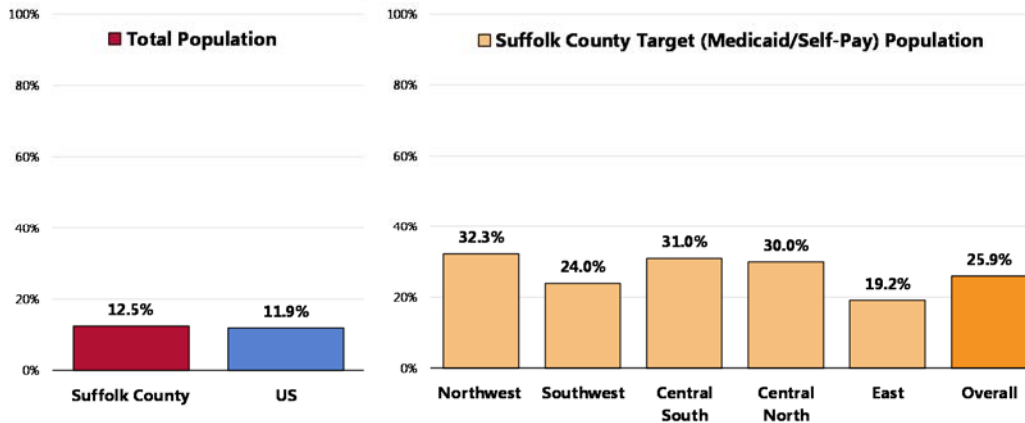
Total Population

- Suffolk County 12.5%
- US 11.9%

Suffolk County Target (Medicaid/Self-Pay) Population

- Northwest 32.3%
- Southwest 24.0%
- Central South 31.0%
- Central North 30.0%
- East 19.2%
- Overall 25.9%

Viewed by healthcare coverage, the prevalence of "fair/poor" mental health is highest in the Medicaid population and similarly high in the self-pay and Medicare segments. It is notably low among those with private insurance.

Self-Reported Mental Health Status
(By Insurance Type, Suffolk County 2014)

- ■ Total Population
- ■ Target (Medicaid/Self-Pay) Population

	Medicare	Private Insurance	Self-Pay	Medicaid
	20.0%	5.5%	17.6%	31.9%
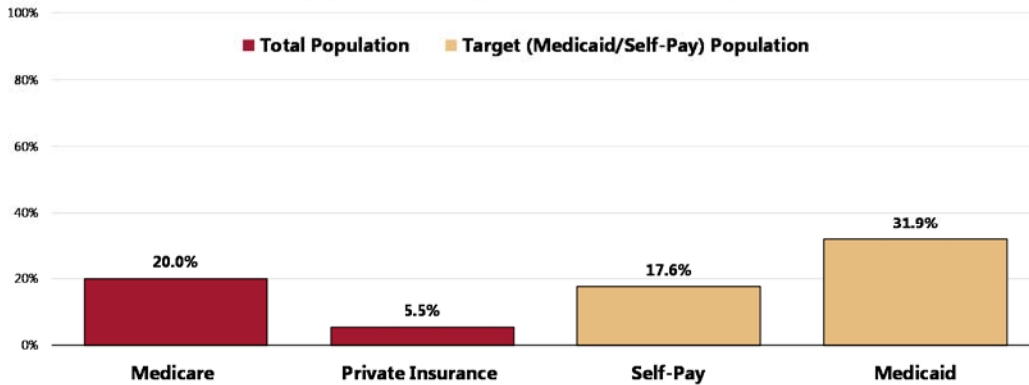
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 103]
Notes: • Asked of all respondents.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Depression

A total of 18.7% of Suffolk County Total Population adults have been diagnosed by a physician as having a depressive disorder (such as depression, major depression, dysthymia, or minor depression). This is similar to national findings. A total of 27.4% of adults in the Target Population have been diagnosed with a depressive disorder. It is less favorable than the countywide figure and statistically similar by subarea.

Have Been Diagnosed With a Depressive Disorder

- ■ Total Population
- ■ Suffolk County Target (Medicaid/Self-Pay) Population

Suffolk County	US	Northwest	Southwest	Central South	Central North	East	Overall
18.7%	20.4%	25.5%	25.0%	34.0%	32.7%	24.0%	27.4%

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 106]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.
• Depressive disorders include depression, major depression, dysthymia, or minor depression.

Medicaid recipients have a much higher prevalence of diagnosed depression than uninsured respondents or those with private insurance (Medicare recipients appear to have a similarly high prevalence).

Have Been Diagnosed With a Depressive Disorder
(By Insurance Type, Suffolk County 2014)

- ■ Total Population
- ■ Target (Medicaid/Self-Pay) Population

Medicare: 45.5%
Private Insurance: 17.3%
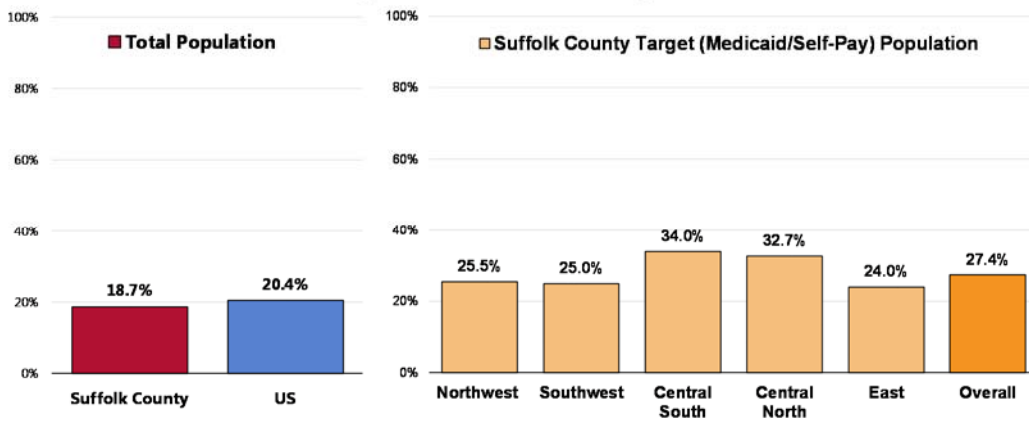Self-Pay: 10.1%
Medicaid: 40.2%
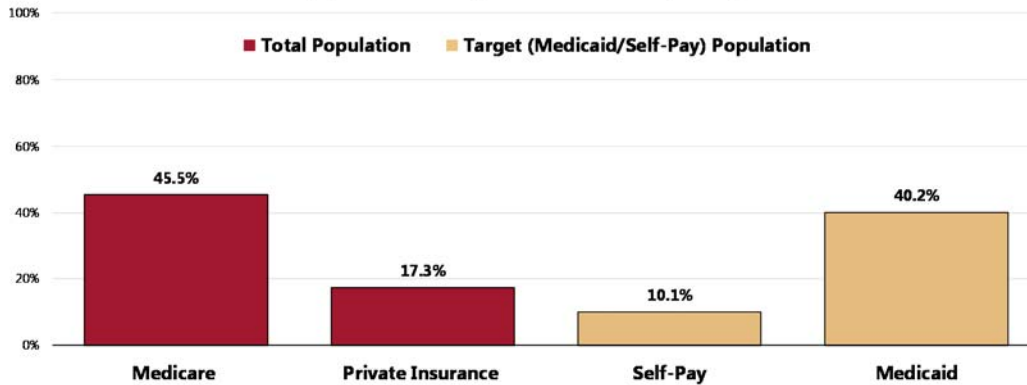
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 106]

Notes:
- Asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
- Depressive disorders include depression, major depression, dysthymia, or minor depression.

Suicide

Between 2009 and 2011, there was an annual average age-adjusted suicide rate of 8.2 deaths per 100,000 population in Suffolk County. This is higher than the statewide rate and lower than the national rate. It satisfies the Healthy People 2020 target of 10.2 or lower.

Suicide: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)
Healthy People 2020 Target = 10.2 or Lower
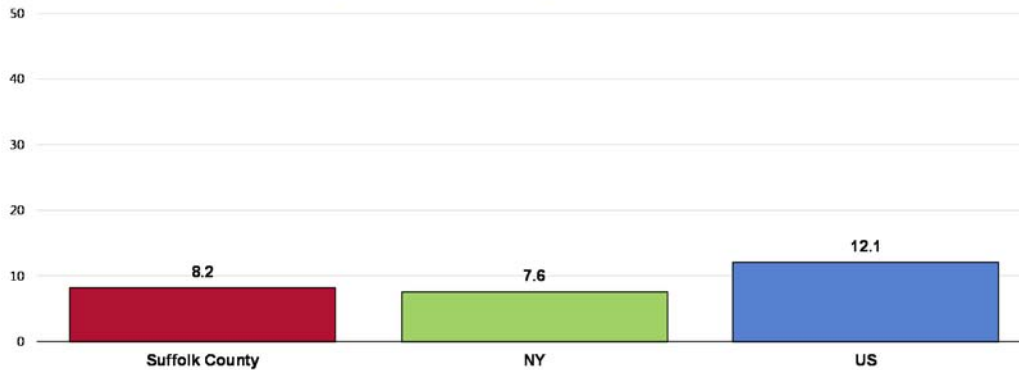
Suffolk County: 8.2
NY: 7.6
US: 12.1

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MHMD-1]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.
- Local, state and national data are simple three-year averages.

Mental Health Treatment

Among Total Population adults with a diagnosed depressive disorder, 88.5% acknowledge that they have sought professional help for a mental or emotional problem. This is higher than the national figure. It is lower in the Target Population (73.6%).

Adults With Diagnosed Depression Who Have Ever Sought Professional Help for a Mental or Emotional Problem
(Among Adults With Diagnosed Depressive Disorder)

Suffolk County Total Population	Suffolk County Target (Medicaid/Self-Pay) Population	US
88.5%	73.6%	76.6%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 126]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Reflects those respondents with a depressive disorder diagnosed by a physician (such as depression, major depression, dysthymia, or minor depression).

Key Informant Input

Limited access and limited transportation. - Other Health Professional

Access to proper care, navigating the health care system, understanding the value of health care and being able or motivated to take proper care of themselves are some of challenges faced by this community. Specifically, people with mental health conditions have difficulty identifying and recognizing health problems, understanding when to seek help, following through with the recommendations of the health provider, or even following through with appointments. Coordinating care among their numerous providers, specifically coordinating physical and behavioral health. Affording the care needed, co-payments, proper nutrition, etc. Finding transportation to providers, valuing their health. Based upon their condition, some persons have cognition issues or are plagued with anxiety, depression and or psychosis which complicate their ability to relay their medical issues properly to their health providers and to follow through on needed treatment. - Other Health Professional

Housing, access to care, utilization of primary medical care, stigma, medication compliance. - Other Health Professional

Major shortages in mental health providers and greatly restricted insurance coverage for mental health services. - Other Health Professional

Long waits to obtain initial appointments. Transportation. Lack of bilingual providers. - Other Health Professional

The dual diagnosis, developmental disability, psychiatric condition, presents a challenge for our individuals with regard to finding appropriate programs to serve them. Our OPWDD certified

programs are geared to serve people with developmental disabilities and can often handle the secondary psychiatric diagnosis as well. But when the psychiatric diagnosis becomes the primary issue, it is very difficult to find an appropriate program for the person. The OMH system will most often refuse to serve someone who also has a developmental disability. - Social Service Provider

Coordination of care linked services that will address their needs, and availability of these services. - Other Health Provider

Compliance with medications and appointments. - Other Health Professional

Lack of awareness and a resistance to treatment. - Physician

Mental health patients are often under treated, poorly treated and or highly medicated and improperly placed. Few MH services available on LI and fewer in community settings or skilled facilities. - Other Health Professional

Finding confidential care, agreeing to care and ongoing care. - Public Health Professional

Undiagnosed and untreated mental issues. - Other Health Professional

Lack of intermediate levels of care, service. Inpatient programs can manage many symptoms and treatment, but the next lower level of care is so different, so much less that clients frequently end up rehospitalized. - Social Service Provider

Lack of screening for mental health issues, Lack of resources, education and support for patients and families. Lack of Psychiatrists, nurse practitioners, Psychiatric nurses and LCSWs on Eastern Long Island. Lack of emergency mental health resources for prevention and crisis intervention. Lack of knowledge about mental health community resources and therefore lack of appropriate referrals to mental health community resources for prevention or support. - Other Health Professional

Lack of support and social activities, stigma. - Other Health Professional

Only 30 of people on Long Island have Medicaid. Where do the rest of the people get mental health services. Many providers don't take insurance, the commercial insurance rates are not competitive and there are long waitlists for clinics. Accessing Psychiatrists is also an issue. - Other Health Professional

Poor case management and poor communication between service providers. - Social Service Provider

Uninsured, no access to treatment. Veteran's long waits. Addicted, inconsistent care, misdiagnosed. Children, not enough services available. - Other Health Professional

Medicaid insured and low income groups are disproportionately affected because there is insufficient reimbursement for providing these services, resulting in inadequate access because there are not enough providers to meet the demand. - Public Individuals with developmental disabilities because they are assessed as having behavioral challenges that are unrecognized as having a mental health component. - Social Service Provider

Homeless, no structure. - Other Health Professional

Racial, ethnic minorities, the poor and underserved face the greatest difficulty accessing all services, not just mental health services. Unequal treatment is a known fact, it has to do with access, location and barriers to cultural competent services. - Public Health Professional

Groups speaking languages other than English. The homeless. - Other Health Professional

Persons without financial resources. - Other Health Professional

Low income, poverty level. The waiting list or Family Service League is months long and the low income person cannot afford to pay private practitioners. They also do not have the ability to travel for services. - Other Health Professional

People who are active in addiction. - Social Service Provider

Elderly, mental health issues are under reported. Masked by dementia or other ailments, and is under treated. - Other Health Professional

Substance Abuse - Findings from the PRC Population and Key Informant Surveys

In 2005, an estimated 22 million Americans struggled with a drug or alcohol problem. Almost 95% of people with substance use problems are considered unaware of their problem. Of those who recognize their problem, 273,000 have made an unsuccessful effort to obtain treatment. These estimates highlight the importance of increasing prevention efforts and improving access to treatment for substance abuse and co-occurring disorders.

Substance abuse has a major impact on individuals, families, and communities. The effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems. These problems include:

- Teenage pregnancy
- Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)
- Other sexually transmitted diseases (STDs)
- Domestic violence
- Child abuse
- Motor vehicle crashes
- Physical fights
- Crime
- Homicide
- Suicide

The field has made progress in addressing substance abuse, particularly among youth. According to data from the national Institute of Drug Abuse (NIDA) Monitoring the Future (MTF) survey, which is an ongoing study of the behaviors and values of America's youth between 2004 and 2009, a drop in drug use (including amphetamines, methamphetamine, cocaine, hallucinogens, and LSD) was reported among students in 8th, 10th, and 12th grades. Note that, despite a decreasing trend in marijuana use which began in the mid-1990s, the trend has stalled in recent years among these youth. Use of alcohol among students in these three grades also decreased during this time.

Substance abuse refers to a set of related conditions associated with the consumption of mind- and behavior-altering substances that have negative behavioral and health outcomes. Social attitudes and political and legal responses to the consumption of alcohol and illicit drugs make substance abuse one of the most complex public health issues. In addition to the considerable health implications, substance abuse has been a flash-point in the criminal justice system and a major focal point in discussions about social values: people argue over whether substance abuse is a disease with genetic and biological foundations or a matter of personal choice.

Advances in research have led to the development of evidence-based strategies to effectively address substance abuse. Improvements in brain-imaging technologies and the development of medications that assist in treatment have gradually shifted the research community's perspective on substance abuse. There is now a deeper understanding of substance abuse as a disorder that develops in adolescence and, for some individuals, will develop into a chronic illness that will require lifelong monitoring and care.

Improved evaluation of community-level prevention has enhanced researchers' understanding of environmental and social factors that contribute to the initiation and abuse of alcohol and illicit drugs, leading to a more sophisticated understanding of how to implement evidence-based strategies in specific social and cultural settings.

A stronger emphasis on evaluation has expanded evidence-based practices for drug and alcohol treatment. Improvements have focused on the development of better clinical interventions through research and increasing the skills and qualifications of treatment providers.

– Healthy People 2020 (www.healthypeople.gov)

Current Drinking
A total of 65.3% of Suffolk County Total Population adults had at least one drink of alcohol in the past month. This is above the statewide and national proportion. In the Target Population, 42.6% of adults had at least one drink of alcohol in the past month (current drinkers). This is below the countywide proportion and is highest in the Central North.

Current Drinkers
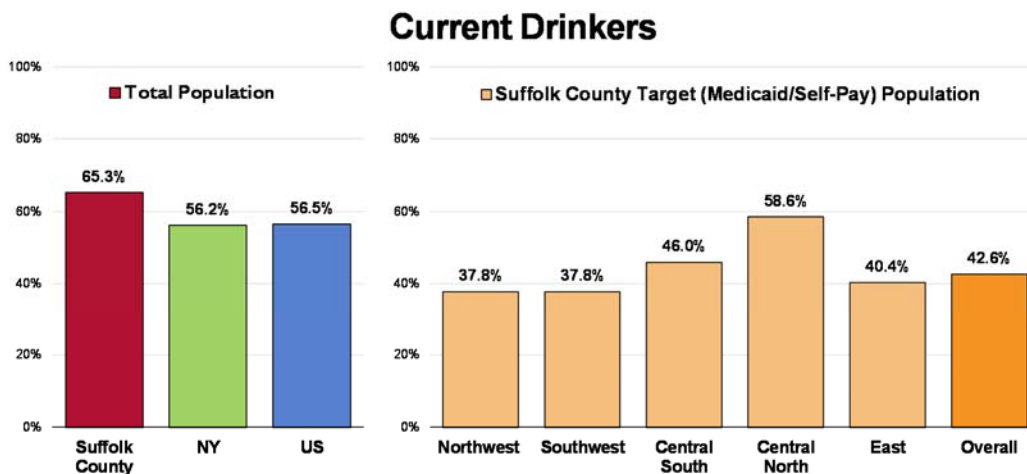
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 167]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.
● Current drinkers had at least one alcoholic drink in the past month.

58

Current drinking is much higher in the privately insured segment.

Current Drinkers
(By Insurance Type, Suffolk County 2014)

■ Total Population   ■ Target (Medicaid/Self-Pay) Population

- Medicare: 33.6%
- Private Insurance: 76.0%
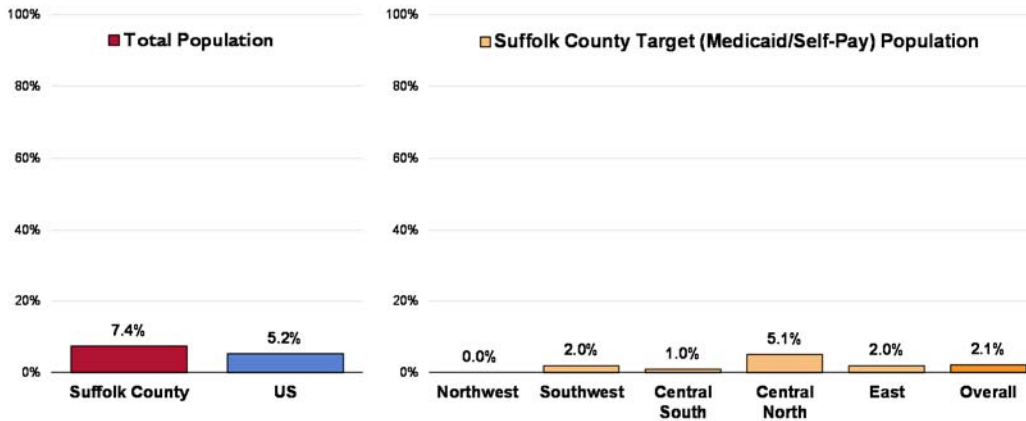- Self-Pay: 43.5%
- Medicaid: 43.0%
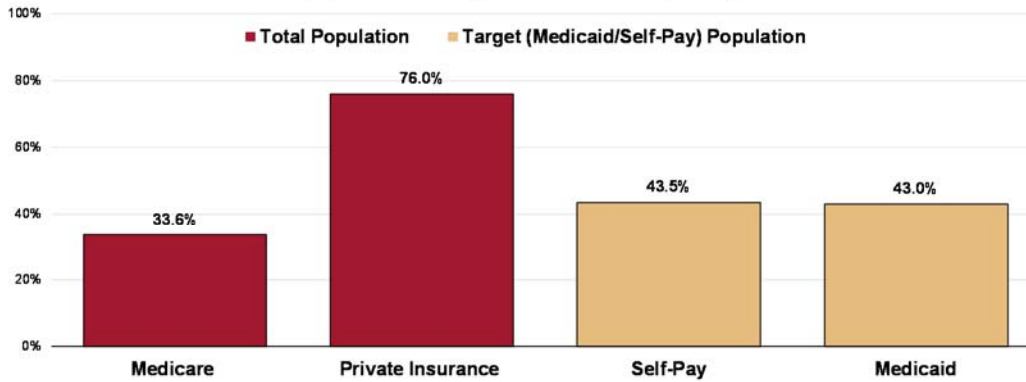
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 167]
Notes: • Asked of all respondents.
  • Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
  • Current drinkers had at least one alcoholic drink in the past month.

Chronic Drinking

A total of 7.4% of County adults averaged two or more drinks of alcohol per day in the past month (chronic drinkers). This is comparable to the national proportion. In the Target Population, 2.1% of adults are chronic drinkers. This is below the countywide proportion, and lowest in the Northwest.

Chronic Drinkers

■ Total Population   ■ Suffolk County Target (Medicaid/Self-Pay) Population

- Suffolk County: 7.4%
- US: 5.2%

- Northwest: 0.0%
- Southwest: 2.0%
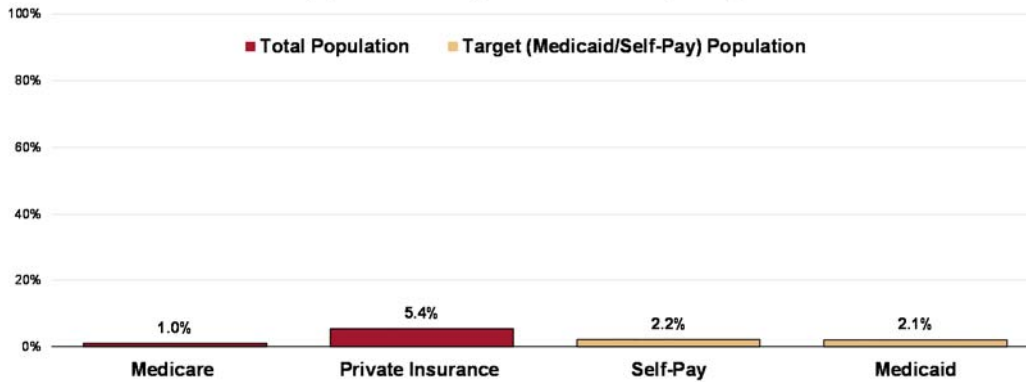- Central South: 1.0%
- Central North: 5.1%
- East: 2.0%
- Overall: 2.1%

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 168]
  • 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.
  • Chronic drinkers are defined as having 60+ alcoholic drinks in the past month.

Chronic drinking prevalence is highest among adults with private healthcare coverage.

Chronic Drinkers
(By Insurance Type, Suffolk County 2014)

■ Total Population   ■ Target (Medicaid/Self-Pay) Population

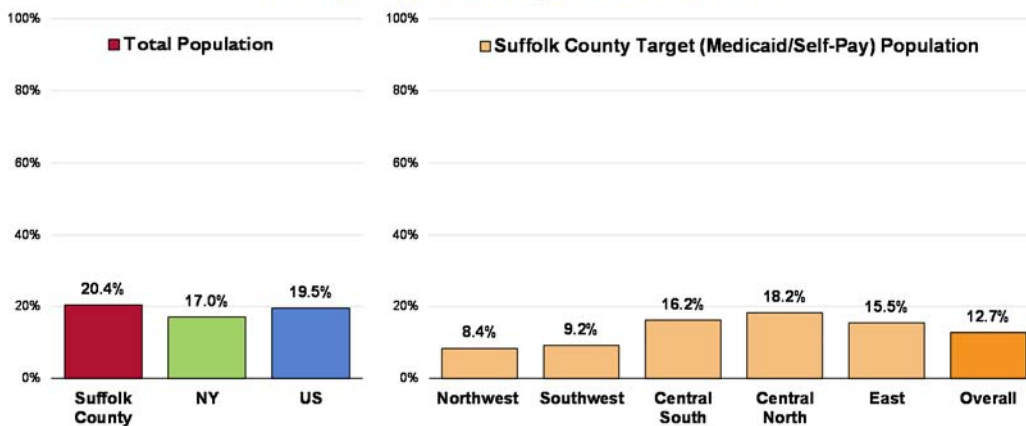|	Medicare	Private Insurance	Self-Pay	Medicaid
	1.0%	5.4%	2.2%	2.1%

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 168]
Notes: ● Asked of all respondents.
● Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
● Chronic drinkers are defined as having 60+ alcoholic drinks in the past month.

Binge Drinking

A total of 20.4% of Suffolk County Total Population adults are binge drinkers. This is similar to New York and national findings. It satisfies the Healthy People 2020 target (24.3% or lower). In the Target Population, 12.7% of adults are binge drinkers. This is well below the countywide proportion and comparable findings by subarea.

Binge Drinkers
Healthy People 2020 Target = 24.4% or Lower

■ Total Population   □ Suffolk County Target (Medicaid/Self-Pay) Population

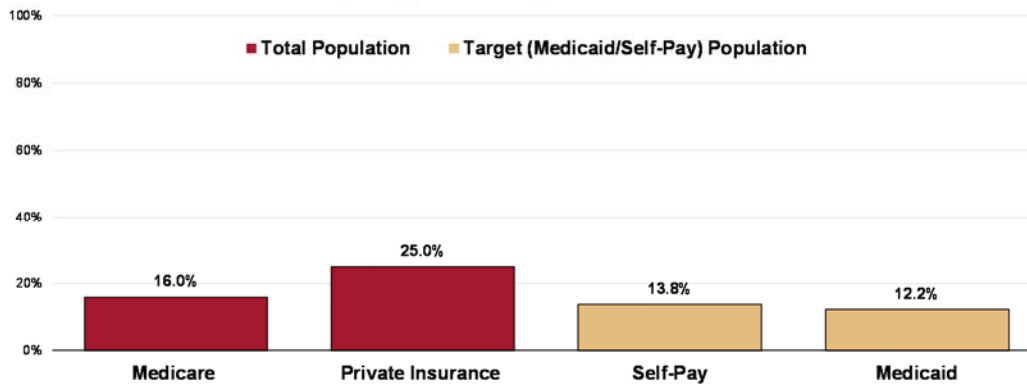| Suffolk County	NY	US	Northwest	Southwest	Central South	Central North	East	Overall
20.4%	17.0%	19.5%	8.4%	9.2%	16.2%	18.2%	15.5%	12.7%

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 169]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
● US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-14.3]
Notes: ● Asked of all respondents.
● Binge drinkers are defined as men having 5+ alcoholic drinks on any one occasion or women consuming 4+ drinks on any one occasion.

Binge drinking is more often noted in the privately insured segment.

Binge Drinkers
(By Insurance Type, Suffolk County 2014)
Healthy People 2020 Target = 24.4% or Lower

- Total Population
- Target (Medicaid/Self-Pay) Population

	Medicare	Private Insurance	Self-Pay	Medicaid
	16.0%	25.0%	13.8%	12.2%

Age-Adjusted Drug-Induced Deaths

Between 2009 and 2011, there was an annual average age-adjusted drug-induced mortality rate of 14.6 deaths per 100,000 population in Suffolk County. This is well above the statewide and national rates. It fails to satisfy the Healthy People 2020 target (11.3 or lower).

Drug-Induced Deaths: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)
Healthy People 2020 Target = 11.3 or Lower

Suffolk County	NY	US
14.6	9.5	13.1

Illicit Drug Use

In the Suffolk County Total Population, 4.5% of adults acknowledge using an illicit drug in the past month. This is comparable to the proportion found nationally and satisfies the Healthy People 2020 target of

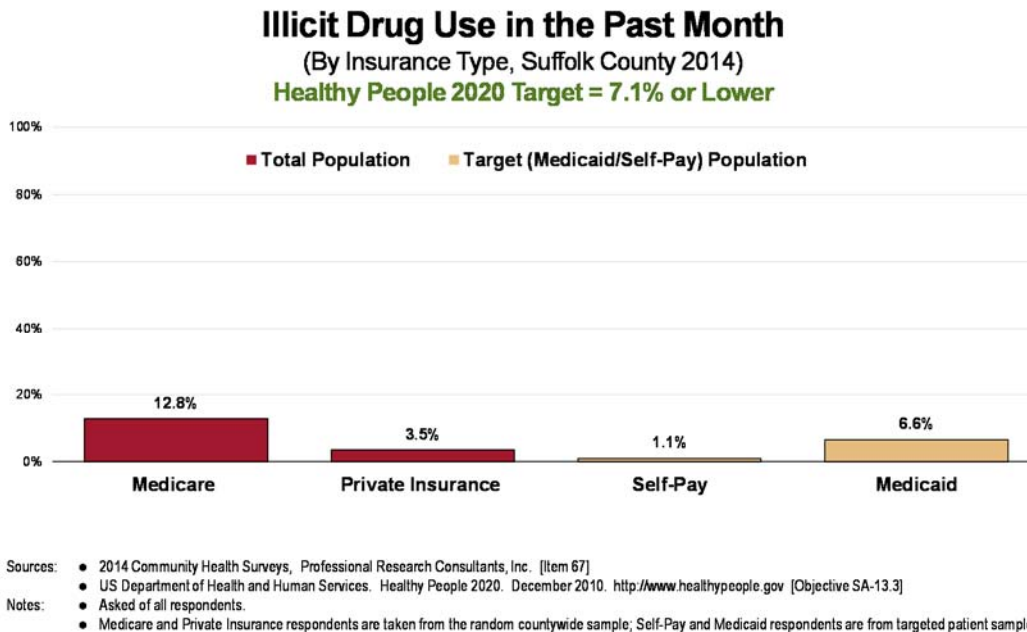7.1% or lower. In the Target Population, 4.2% of adults used an illicit drug in the past month. This is similar to the countywide proportion and favorably low in the Southwest.

Illicit Drug Use in the Past Month
Healthy People 2020 Target = 7.1% or Lower

Total Population — Suffolk County: 4.5%; US: 4.0%

Suffolk County Target (Medicaid/Self-Pay) Population — Northwest: 5.0%; Southwest: 2.0%; Central South: 5.1%; Central North: 9.2%; East: 4.0%; Overall: 4.2%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 67]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-13.3]

Notes:
- Asked of all respondents.

Illicit drug use is much more prevalent among Medicare and Medicaid recipients.

Illicit Drug Use in the Past Month
(By Insurance Type, Suffolk County 2014)
Healthy People 2020 Target = 7.1% or Lower

Total Population / **Target (Medicaid/Self-Pay) Population**

Medicare: 12.8%; Private Insurance: 3.5%; Self-Pay: 1.1%; Medicaid: 6.6%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 67]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective SA-13.3]

Notes:
- Asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Key Informant Input
A total of 59.6% of Key Informants characterized *Substance Abuse* as a "major problem" in the Target Population.

Perceptions of Substance Abuse
as a Problem in the Community for the Target Population
(Key Informants, 2014)

■ Major Problem ☐ Moderate Problem ■ Minor Problem ☐ No Problem At All

59.6%	31.3%	9.1%

Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Comments included:

There are a large number of substance abusers, ranging in age from middle school through adulthood. The middle and high Schools have a large, marijuana, alcohol and opiate, including heroin, problem. - Other Health Professional

There is a heroin and opiate epidemic in the County and there are no community based providers that can safely provide the detox services that are required to help this population begin their recovery. It effects all of their healthcare issues negatively when it is not treated. - Other Health Professional

Substance abuse is a major problem in our community. The prevalence is increasing, and there are large numbers of MVA and overdoses in Emergency Department from this problem. The number of people that come into the Emergency Department with substance abuse, dependence problems continues to increase. Unfortunately there are many deaths and suicides as a result of this disorder. - Other Health Professional

This is a very common issue amongst low-income populations that use substances to self-medicate. Lack of education or community support, activities contributes to this as well. - Other Health Professional

Limited number of service providers that accept Medicaid or have a sliding scale fee. Wait lists, short stays not allowing for recovery, just getting people over a hump. - Other Health Professional

Stress reliever and often done to alleviate mental health symptoms. Not being treated properly by providers. Substances are too easily accessible to people. Socially acceptable and people conform to fit in. Once started, people become addicted to substances. People seeking help for pain management often become addicted. Addiction often leads to crime due to altered states and urges to get more drugs. People using IV drugs are vulnerable to other diseases. - Social Service Provider

Clients self-medicate. - Social Service Provider

The lure of alcohol and marijuana in the youth. Our youth describe that there is nothing else to do, which does seem to be the responsibility of the parents to help their children be involved in activities, of which there are many. Alcohol use is associated with socializing. The addictive quality of above. Easy access to substances in community. Family history of addiction. - Social Service Provider

Gangs use drug sales to fund gang operations. They sell to youth and community who are vulnerable. We live in gang territory. - Community/Business Leader

Lack of public knowledge about substance use and where to obtain help. Limited access to services, long wait times for access to care. lack of a variety of addiction medicine options. Lack of available ambulatory full-service providers that can address an individual's needs in a comprehensive, integrated manner. - Other Health Professional

Again, socioeconomic status plays into this problem. Lack of employment, housing and a poor educational system in these neighborhoods may lead to drug use and gambling. A vicious hereditary cycle continues. - Other Health Professional

Barriers to treatment include affordability and transportation as well as lack of services in the individual towns. - Other Health Professional

When the small window of opportunity opens up and someone is finally ready to receive help and they reach out, they are told they must first be evaluated and meet medical necessity criteria outlined by all insurance companies, even Medicaid Managed Care. Treatment is limited once it starts and most often does not meet the need for the person receiving TX. - Other Health Professional

Very limited insurance coverage and a push to discharge from rehab facilities very quickly due to lack of payment. - Other Health Professional

Not enough treatment services available. - Other Health Professional

Not knowing where to go for help. Not being able to afford it and lack of identification and referrals by health care providers. - Other Health Professional

Stable and appropriate housing, insurance companies and different approaches among providers. - Other Health Professional

The stigma attached to the Medicaid population and the uninsured is palatable. A person who has a family history of substance abuse or mental illness is at greater risk of developing a substance abuse problem. - Other Health Professional
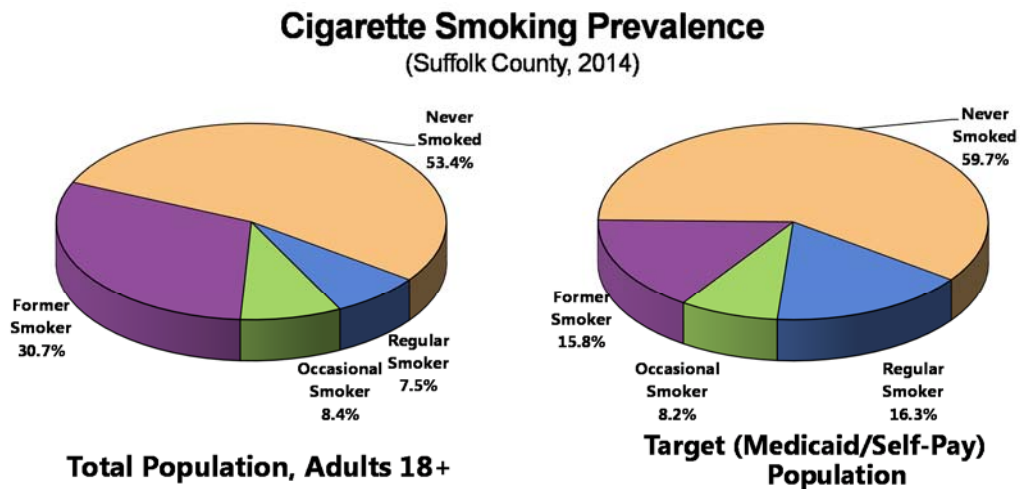
Tobacco Use

Tobacco use is the single most preventable cause of death and disease in the United States. Each year, approximately 443,000 Americans die from tobacco-related illnesses. For every person who dies from tobacco use, 20 more people suffer with at least one serious tobacco-related illness. In addition, tobacco use costs the US $193 billion annually in direct medical expenses and lost productivity. Scientific knowledge about the health effects of tobacco use has increased greatly since the first Surgeon General's report on tobacco was released in 1964. Tobacco use causes cancer, heart disease, lung diseases (including emphysema, bronchitis, and chronic airway obstruction), premature birth, low birth weight,

stillbirth, and infant death. There is no risk-free level of exposure to secondhand smoke. Secondhand smoke causes heart disease and lung cancer in adults and a number of health problems in infants and children, including: severe asthma attacks; respiratory infections; ear infections; and sudden infant death syndrome (SIDS). Smokeless tobacco causes a number of serious oral health problems, including cancer of the mouth and gums, periodontitis, and tooth loss. Cigar use causes cancer of the larynx, mouth, esophagus, and lung. – Healthy People 2020 (www.healthypeople.gov)

Cigarette Smoking Prevalence
A total of 15.9% of Suffolk County Total Population adults currently smoke cigarettes, either regularly (7.5% every day) or occasionally (8.4% on some days). In the Target Population, 24.5% are current smokers (16.3% every day and 8.2% on some days).

Cigarette Smoking Prevalence
(Suffolk County, 2014)

Total Population, Adults 18+

Never Smoked 53.4%
Former Smoker 30.7%
Occasional Smoker 8.4%
Regular Smoker 7.5%

Target (Medicaid/Self-Pay) Population

Never Smoked 59.7%
Former Smoker 15.8%
Occasional Smoker 8.2%
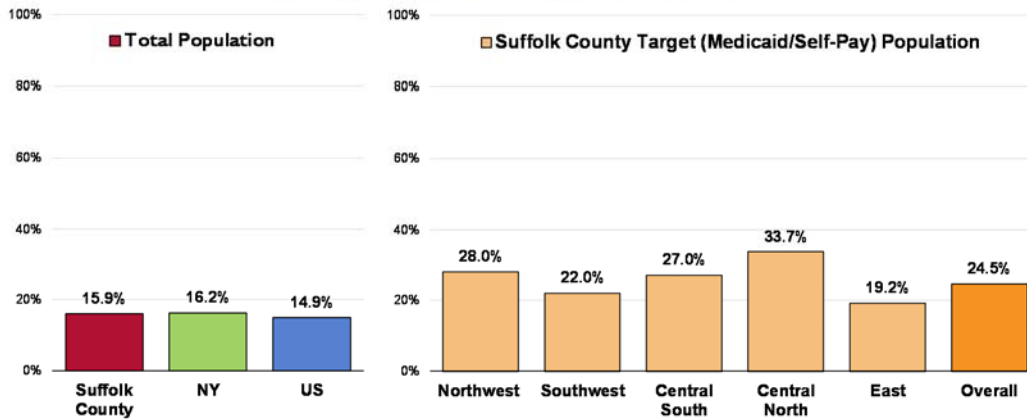Regular Smoker 16.3%

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 163]
Notes: ● Asked of all respondents.

The prevalence of smoking in the Suffolk County Total Population is similar to statewide and national findings. It fails to satisfy the Healthy People 2020 target (12% or lower). The Target Population prevalence (24.5%) is less favorable than the Suffolk County Total Population proportion and unfavorably high in the Central North.

Current Smokers
Healthy People 2020 Target = 12.0% or Lower

Total Population
- Suffolk County: 15.9%
- NY: 16.2%
- US: 14.9%

Suffolk County Target (Medicaid/Self-Pay) Population
- Northwest: 28.0%
- Southwest: 22.0%
- Central South: 27.0%
- Central North: 33.7%
- East: 19.2%
- Overall: 24.5%

Current smokers are more prevalent in the Medicare and Medicaid populations.

Current Smokers
(By Insurance Type, Suffolk County 2014)
Healthy People 2020 Target = 12.0% or Lower
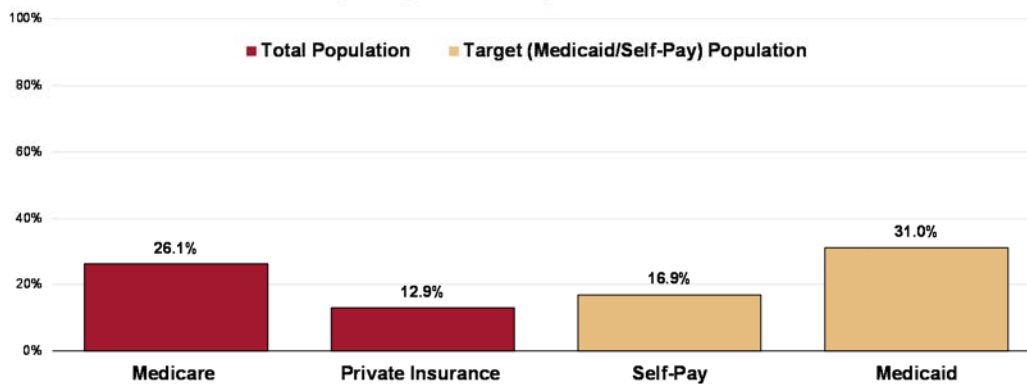
Total Population / Target (Medicaid/Self-Pay) Population
- Medicare: 26.1%
- Private Insurance: 12.9%
- Self-Pay: 16.9%
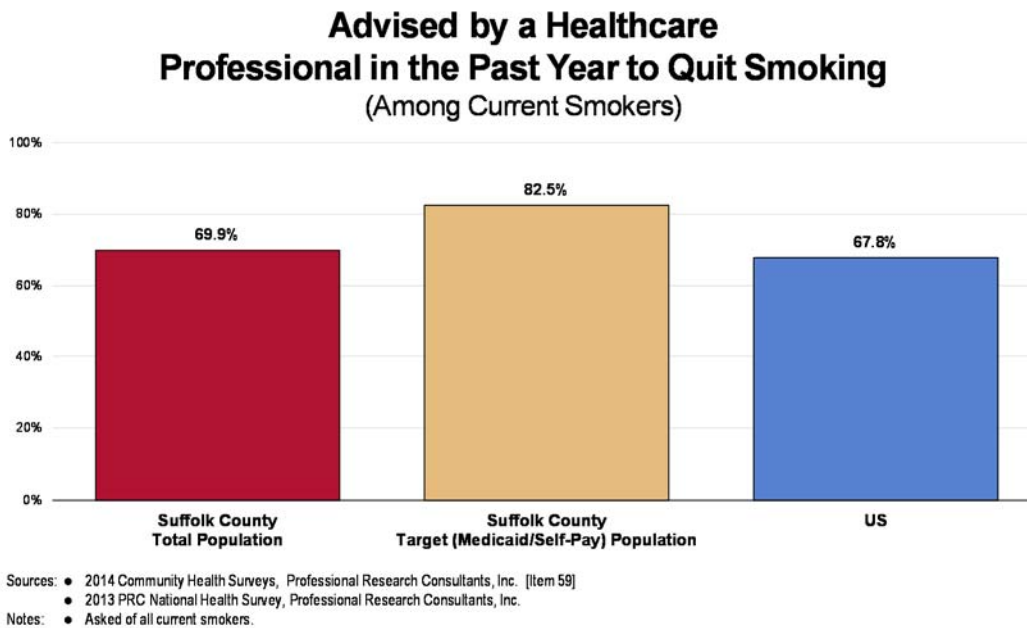- Medicaid: 31.0%

Smoking Cessation

Preventing tobacco use and helping tobacco users quit can improve the health and quality of life for Americans of all ages. People who stop smoking greatly reduce their risk of disease and premature death. Benefits are greater for people who stop at earlier ages, but quitting tobacco use is beneficial at any age. Many factors influence tobacco use, disease, and mortality. Risk factors include race/ethnicity, age, education, and socioeconomic status. Significant disparities in tobacco use exist geographically; such

disparities typically result from differences among states in smoke-free protections, tobacco prices, and program funding for tobacco prevention.
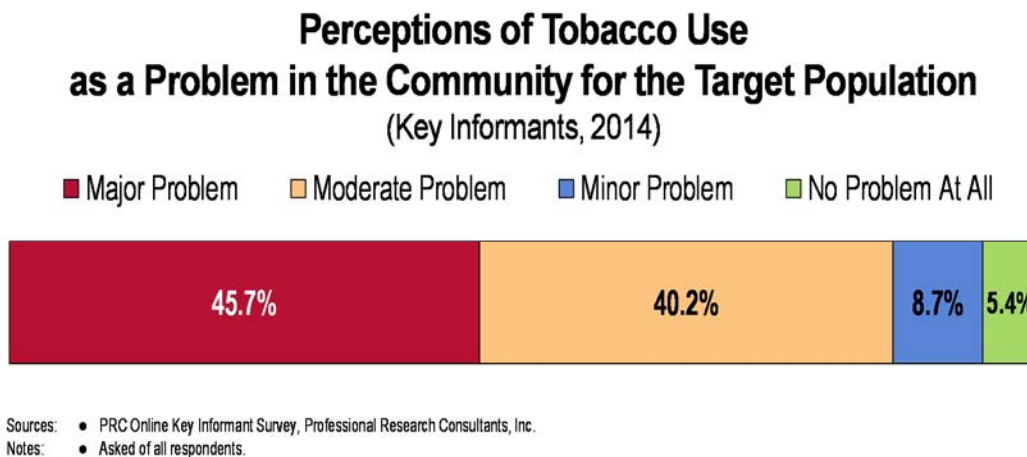 – Healthy People 2020 (www.healthypeople.gov)

Health Advice about Smoking Cessation
A total of 69.9% of smokers say that a doctor, nurse or other health professional has recommended in the past year that they quit smoking. This is similar to the national percentage and higher prevalence in the Target Population (82.5%).

Advised by a Healthcare Professional in the Past Year to Quit Smoking
(Among Current Smokers)

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 59]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all current smokers.

Key Informant Input

Perceptions of Tobacco Use as a Problem in the Community for the Target Population
(Key Informants, 2014)

Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Comments included:

High number of smokers who are struggling with mental illness or substance abuse. - Other Health Professional

Continues to be over-utilized by lower SES and those with addiction to substances and those with SPMI. E-cigarettes, and their use by younger people. - Other Health Professional

Persons with mental health conditions are the highest users of tobacco. Clients report that they have used smoking to combat the symptoms associated with their mental illness, smoke more because of boredom and lack of other activities in their life, work, child care responsibilities, etc.. Smoking is so prevalent among others they associate with that it is impossible to quit. - Other Health Professional

Many clients tell me that it is the only pleasure they have. As we discuss the health risks and they are close to the pre-contemplative or contemplative phase the addiction to nicotine is very hard for them. Many of our clients use the loose bag of cigarettes from the reservation and it is unclear what the contents of those cigarettes are. All of our staff have been training in the tobacco cessation program by FIT, but it has been very difficult to motivate clients to change this behavior. - Social Service Provider

Lack of enforcement. Gas stations and convenience stores still sell to minors. - Public Health Professional

Addictive quality starting at a very young age because it's prevalent among the adults in the community. - Physician

Coexisting Behavioral, Substance Abuse and Physical Health Conditions

"Multiple studies suggest that collaboration between medical and behavioral health providers improves patient outcomes and satisfaction." – Agency for Healthcare and Research Quality, U.S. Dept. of Health & Human Services

Behavioral, substance abuse and physical conditions often coexist. Physical conditions that can mediate early mortality, such as metabolic syndrome, are also increased in individuals with psychiatric disorders. Common examples of co-occurring mental health/substance abuse disorders include the combinations of major depression with cocaine addiction, alcohol addiction with panic disorder, alcoholism and polydrug addiction with schizophrenia, and borderline personality disorder with episodic polydrug abuse. The combinations of problems and psychiatric disorders vary along important dimensions, such as severity, chronicity, disability, and degree of impairment in functioning. Co-occurring tobacco use is a significant contributor to the increase in mortality among individuals with psychiatric disorders.[106]

Other notable facts concerning coexisting behavioral and physical conditions include:
• Mortality is increased and lifespan is reduced by as much as 25 years among individuals with psychiatric illness as compared to the general population.
• Increased risk of mortality with psychiatric illness is particularly well documented for schizophrenia and mood disorders, including depression.
• Trauma exposure is associated with higher rates of developing physical conditions.

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[106] Report provided by Dr. Laura Fochtmann, MD, Stony Brook Medicine, Dept. of Psychiatry

- Conversely, individuals with physical conditions such as diabetes have increased rates of depression which contributes to increased morbidity and mortality.[107]
- About half of individuals in OMH licensed programs have at least one chronic medical condition, similar to data for Long Island and NY as a whole.[108]
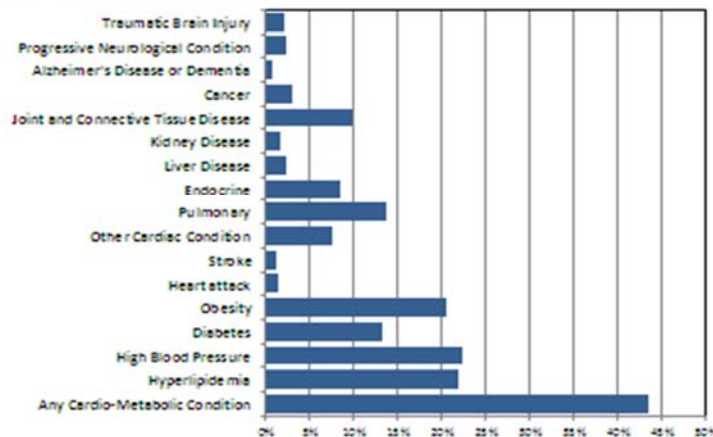
As shown in the following tables:

Proportion of Patients served in OMH Licensed Programs with Chronic Medical Conditions
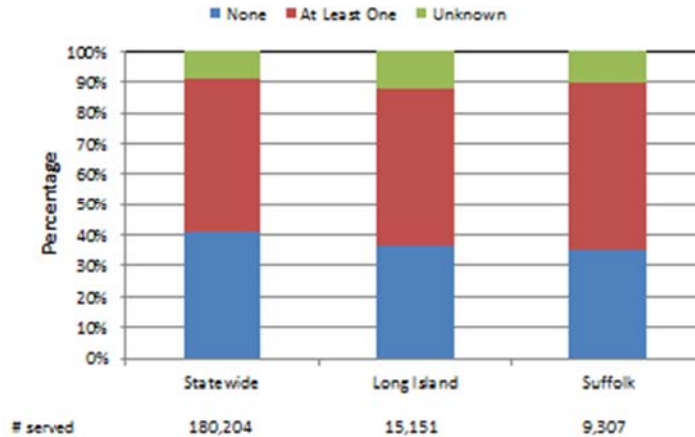
FROM: New York State Office of Mental Health 2013 Patient Characteristics Survey
https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm

Proportion of Patients served in OMH Licensed Programs with the Specified Condition

FROM: New York State Office of Mental Health 2013 Patient Characteristics Survey
https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm

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[107] Ibid
[108] New York State Office of Mental Health 2013 Patient Characteristics Survey https://www.omh.ny.gov/omhweb/statistics/pcs-message.htm

- Almost half of individuals in OMH programs with a cardiometabolic disorder (about 43% of all OMH program patients) are also prescribed antipsychotics. A sizeable fraction of individuals are on multiple medications suggesting that medication thinning algorithms may be especially valuable in this high-risk, high-utilization group.

Percentage of Psychiatric Inpatients Hospitalized in 2013 who are Readmitted within 30 days
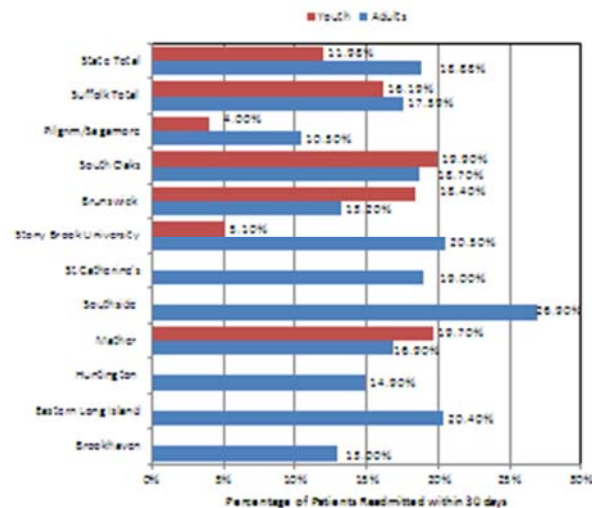
NOTE: Pilgrim/Sagamore readmit rates are artificially low due to their admission policies
FROM: OMH County Profiles Dashboard (http://bi.omh.ny.gov/cmhp/dashboard#tab5)

- At some institutions, as high as 27% of psychiatric inpatients are readmitted within 30 days.

2013 Services Received by Medicaid Recipients who are seen in an OMH-Licensed Program (Excludes Managed Care Services)
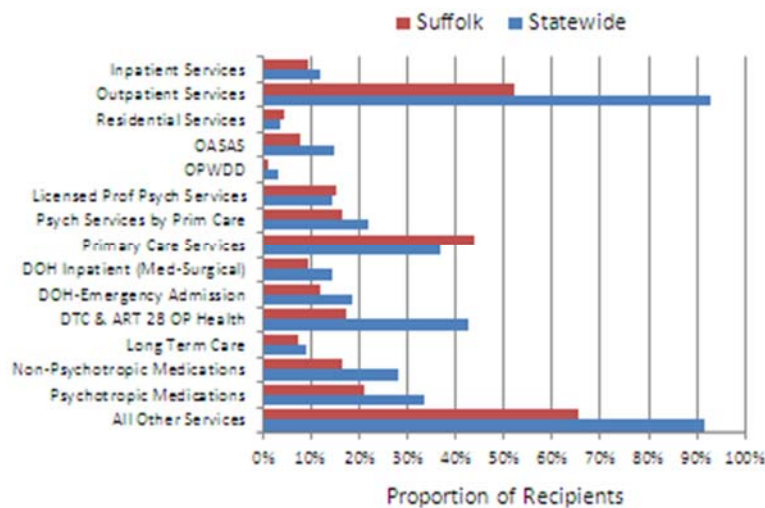
FROM: New York State Office of Mental Health Medicaid Service Utilization
http://bi.omh.ny.gov/cmhp/all-services

2013 Medication-related Indicators for Medicaid Recipients served in OMH Licensed Programs

■ New York State   ■ Long Island Region   ■ Suffolk County
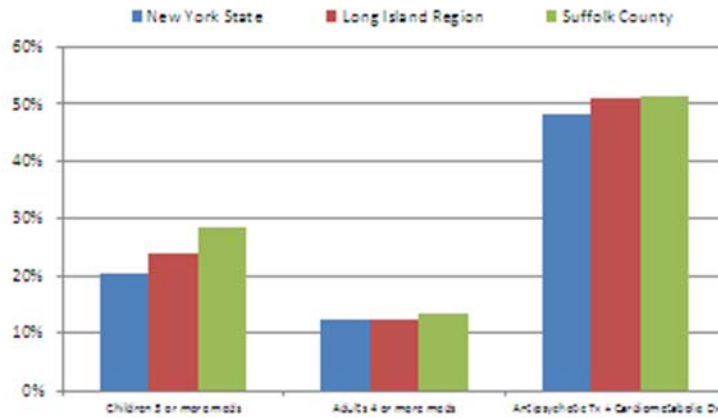
FROM: New York State Office of Mental Health County Profiles Portal
http://bi.omh.ny.gov/cmhp/dashboard#tab9

- Patients receive services across in many settings across the care continuum. There are many Medicaid claims for medications in this population (psychotropic and non-psychotropic).

Rates of Suicide and Suicide Attempts in Patients Receiving Care in OMH-Licensed Programs

■ Long Island   ■ NY State

Rate per 10,000 individuals treated
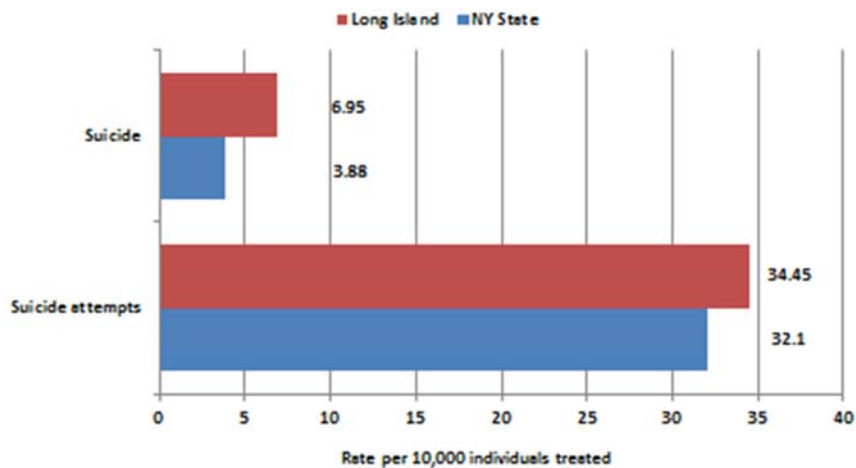
FROM: "Suicide as a Never Event in New York State"
http://www.omh.ny.gov/omhweb/dqm/bqi/suicideasaneverevent.pdf

- Over 34/10,000 patients receiving care in OMH facilities attempt suicide. This exceeds the statewide rate.

Cancer - Findings from the PRC Population and Key Informant Surveys

Continued advances in cancer research, detection, and treatment have resulted in a decline in both incidence and death rates for all cancers. Among people who develop cancer, more than half will be alive in five years. Yet, cancer remains a leading cause of death in the United States, second only to heart disease.

Many cancers are preventable by reducing risk factors such as: use of tobacco products; physical inactivity and poor nutrition; obesity; and ultraviolet light exposure. Other cancers can be prevented by getting vaccinated against human papillomavirus and hepatitis B virus. In the past decade, overweight and obesity have emerged as new risk factors for developing certain cancers, including colorectal, breast, uterine corpus (endometrial), and kidney cancers. The impact of the current weight trends on cancer incidence will not be fully known for several decades. Continued focus on preventing weight gain will lead to lower rates of cancer and many chronic diseases.

According to the SCDHS:

Cancer incidence rates are highest among whites (includes Hispanics) in New York State and Suffolk County. Hispanics had a lower cancer incidence rate. 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. These racial differences are more pronounced when comparing death rates in white and Black males.

The overall cancer death rates for whites in Suffolk County are declining, though for Black males it is reported as being stable. 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, followed by white women (non-Hispanic, and Hispanic women. In addition, they have the lowest percentage of breast cancers diagnosed at an early stage. 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
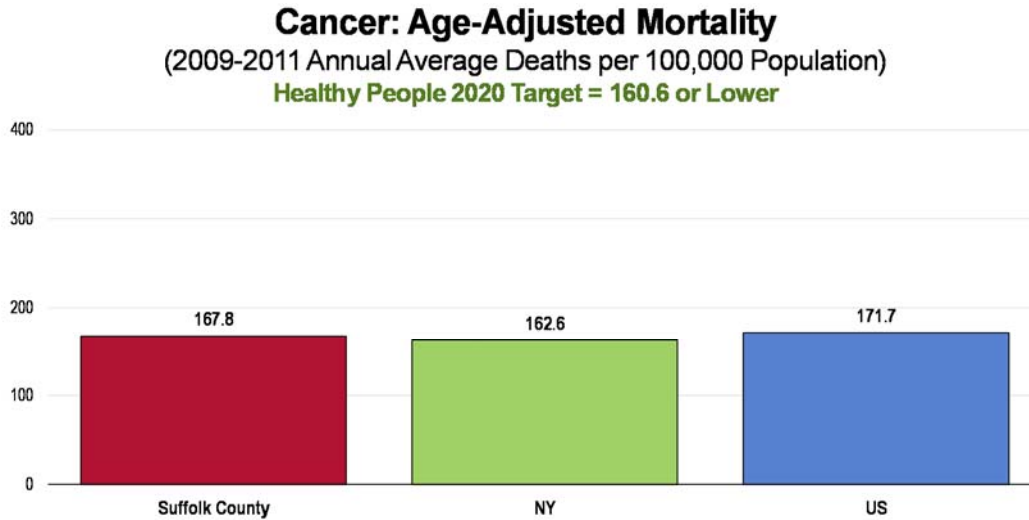
Similarly, for cervical cancer, 33.3 percent are diagnosed at an early stage in Black women, while 45.0 percent in white and 58.8 percent in Hispanic women are diagnosed early.

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. (Suffolk County Community Needs Assessment 2014-2017)

Age-Adjusted Cancer Deaths

Between 2009 and 2011, there was an annual average age-adjusted cancer mortality rate of 167.8 deaths per 100,000 population in Suffolk County. This is comparable to the statewide and rates and comparable to the Healthy People 2020 target of 160.6 or lower.

Cancer: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)
Healthy People 2020 Target = 160.6 or Lower

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-1]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.
- Local, state and national data are simple three-year averages.

Cancer Deaths by Site

 Lung cancer is by far the leading cause of cancer deaths in Suffolk County. Other leading sites include breast cancer among women, prostate cancer among men, and colorectal cancer (both genders). As can be seen in the following chart (referencing 2009-2011 annual average age-adjusted death rates):

- The lung cancer death rate is less favorable than the state rate but more favorable than the national rate;
- The prostate cancer rate is more favorable than both the state and national rates;
- The breast cancer rate is comparable to the state and the US rates; and
- The colorectal cancer rate is less favorable than the state rate but similar to the US rate.

Age-Adjusted Cancer Death Rates by Site
(2009-2011 Annual Average Deaths per 100,000 Population)

|	Suffolk County	NY	US	HP2020
Lung Cancer	44.9	41.9	47.3	45.5
Female Breast Cancer	22.8	21.8	22.0	20.6
Prostate Cancer	18.8	21.0	21.6	21.2
Colorectal Cancer	16.4	15.4	15.7	14.5

Sources: ● CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
● US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov

Cancer Incidence

Incidence rates reflect the number of newly diagnosed cases in a given population in a given year, regardless of outcome. Here, these rates are also age-adjusted.

Cancer Incidence Rates by Site
(Annual Average Age-Adjusted Incidence per 100,000 Population, 2006-2010)
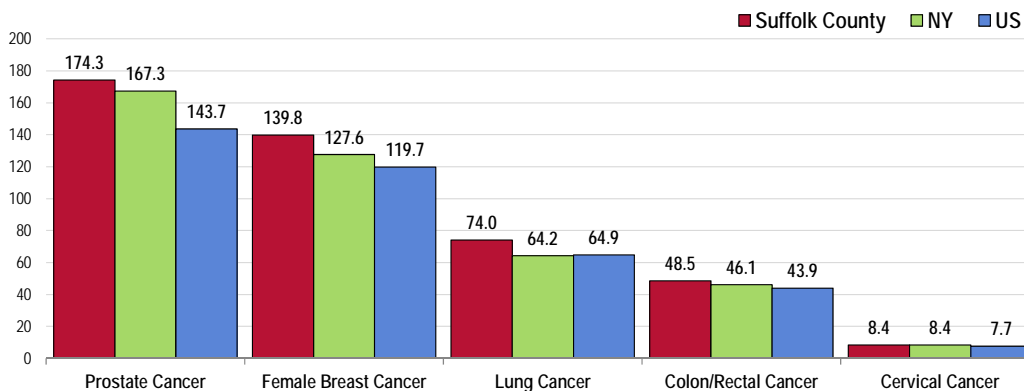
Sources: ● State Cancer Profiles: 2006-10.
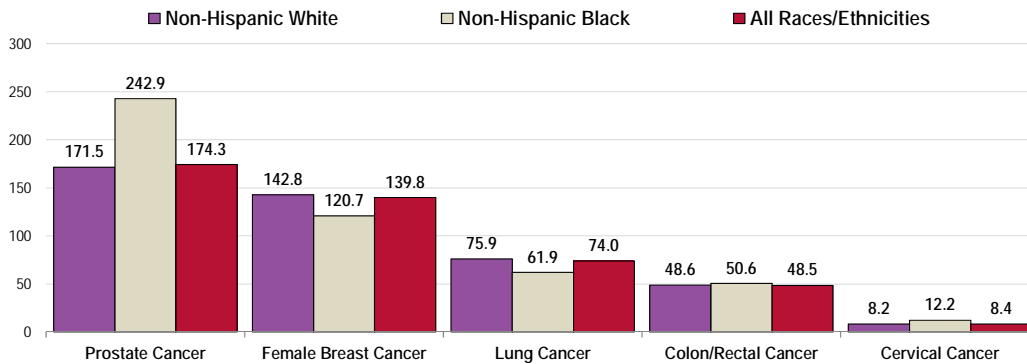● Retrieved August 2014 from Community Commons at http://www.chna.org.
Notes: ● This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of cancers, adjusted to 2000 U.S. standard population age groups (under age 1, 1-4, 5-9, ..., 80-84, 85 and older). This indicator is relevant because cancer is a leading cause of death and it is important to identify cancers separately to better target interventions.

Based on available race data, Non-Hispanic Blacks have a notably higher prostate cancer incidence than whites in Suffolk County. Blacks also report a higher cervical cancer incidence rate while whites have higher incidence of female breast and lung cancers in Suffolk County (the colon/rectal cancer rates are similar by race).

Cancer Incidence Rates by Site and Race/Ethnicity
(Annual Average Age-Adjusted Incidence per 100,000 Population, Suffolk County 2006-2010)

Legend: ■ Non-Hispanic White ☐ Non-Hispanic Black ■ All Races/Ethnicities

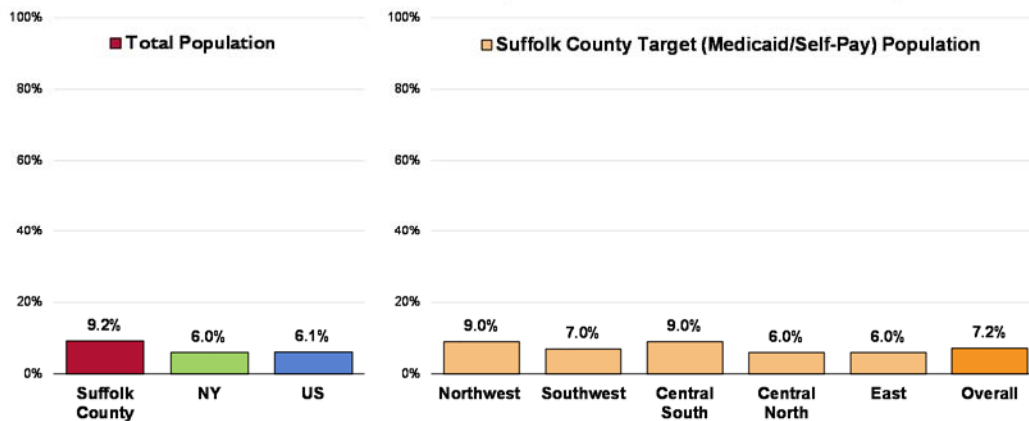| Cancer Site	Non-Hispanic White	Non-Hispanic Black	All Races/Ethnicities
Prostate Cancer	171.5	242.9	174.3
Female Breast Cancer	142.8	120.7	139.8
Lung Cancer	75.9	61.9	74.0
Colon/Rectal Cancer	48.6	50.6	48.5
Cervical Cancer	8.2	12.2	8.4

Sources:
- State Cancer Profiles: 2006-10.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the age adjusted incidence rate (cases per 100,000 population per year) of cancers, adjusted to 2000 U.S. standard population age groups (under age 1, 1-4, 5-9, ..., 80-84, 85 and older). This indicator is relevant because cancer is a leading cause of death and it is important to identify cancers separately to better target interventions.

Prevalence of Cancer (other than skin cancer)

A total of 7.2% of Target Population respondents have (non-skin) cancer. This is similar to the Suffolk County Total Population prevalence. Findings are similar by submarket.

Prevalence of Cancer (Other Than Skin Cancer)

Legend: ■ Total Population ☐ Suffolk County Target (Medicaid/Self-Pay) Population

Total Population			Suffolk County Target (Medicaid/Self-Pay) Population					
Suffolk County	NY	US	Northwest	Southwest	Central South	Central North	East	Overall
9.2%	6.0%	6.1%	9.0%	7.0%	9.0%	6.0%	6.0%	7.2%

Sources:
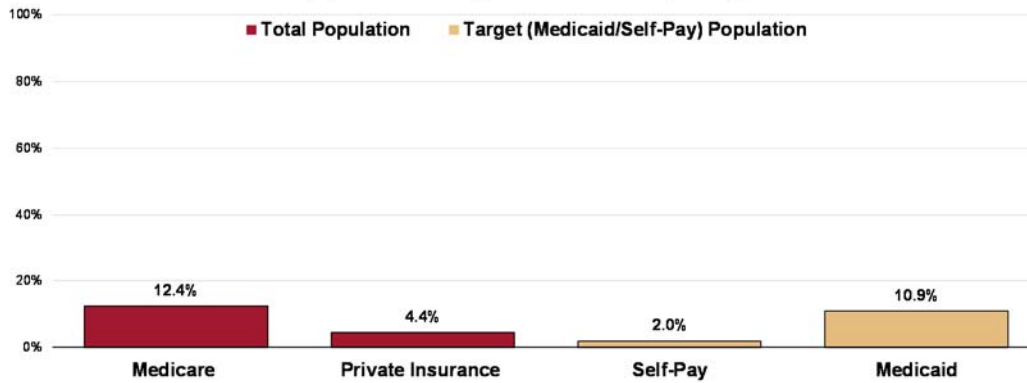- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 31]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 NY data.
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.

Medicare and Medicaid recipients are more likely to have been diagnosed with some type of (non-skin) cancer than those adults with private insurance or no healthcare coverage.

Prevalence of Cancer (Other Than Skin Cancer)
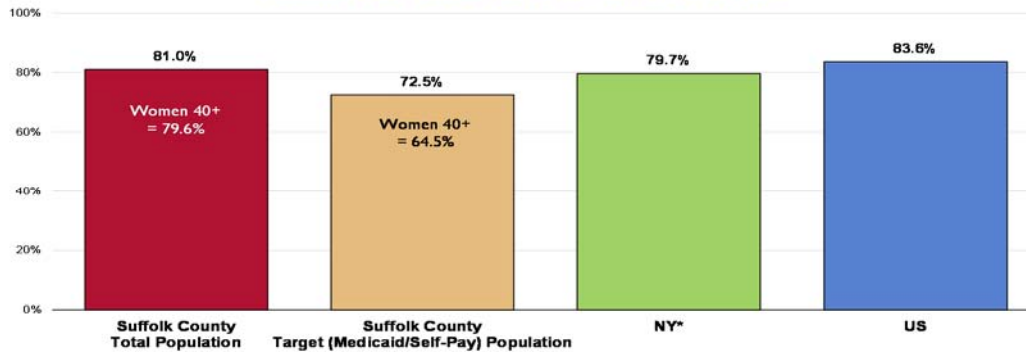### (By Insurance Type, Suffolk County 2014)

Cancer Screenings

The American Cancer Society recommends that both men and women get a cancer-related checkup during a regular doctor's checkup. It should include examination for cancers of the thyroid, testicles, ovaries, lymph nodes, oral cavity, and skin, as well as health counseling about tobacco, sun exposure, diet and nutrition, risk factors, sexual practices, and environmental and occupational exposures.

Screening levels in the community were measured in the PRC Community Health Survey relative to three cancer sites: female breast cancer (mammography); cervical cancer (Pap smear testing); and colorectal cancer (sigmoidoscopy and fecal occult blood testing).

- **Female Breast Cancer Screening -** Among Suffolk County Total Population women age 50-74, 81.0% had a mammogram within the past two years. This is similar to the statewide and national findings (which represent all women 50+), and similar to the Healthy People 2020 target (81.1% or higher). Among women 40+, 79.6% had a mammogram in the past two years. Among the Target Population women age 50-74, 72.5% had a mammogram within the past two years. This is statistically similar to the countywide prevalence. Among Target Population women age 40+, 64.5% had a mammogram in the past two years.

Have Had a Mammogram in the Past Two Years
(Among Women Age 50-74)
Healthy People 2020 Target = 81.1% or Higher

Suffolk County Total Population: 81.0% (Women 40+ = 79.6%)
Suffolk County Target (Medicaid/Self-Pay) Population: 72.5% (Women 40+ = 64.5%)
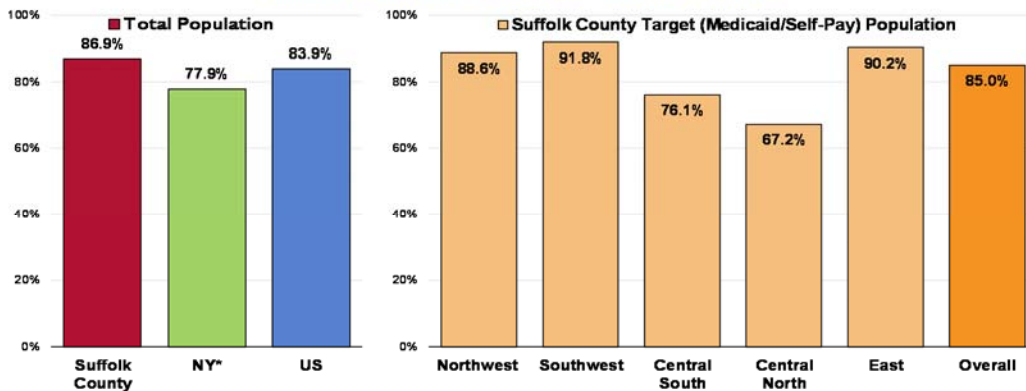NY*: 79.7%
US: 83.6%

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Items 131-132]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 NY data.
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
● US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-17]
Notes: ● Reflects female respondents 50-74.
● *Note that state data reflects all women 50 and older (vs. women 50-74 in local, US and Healthy People data).

- **Cervical Cancer Screenings** - Among County women age 21 to 65, 86.9% had a Pap smear within the past three years. This is better than the New York findings (which represents all women 18+) and comparable to national findings. It fails to satisfy the Healthy People 2020 target (93% or higher). In the Target Population, 85.0% of women age 21 to 65 had a Pap smear in the past three years. This is similar to the countywide prevalence. By submarket, it is highest in the Southwest and lowest in the Central North area.

Have Had a Pap Smear in the Past Three Years
(Among Women Age 21-65)
Healthy People 2020 Target = 93.0% or Higher

Total Population:
Suffolk County: 86.9%
NY*: 77.9%
US: 83.9%

Suffolk County Target (Medicaid/Self-Pay) Population:
Northwest: 88.6%
Southwest: 91.8%
Central South: 76.1%
Central North: 67.2%
East: 90.2%
Overall: 85.0%

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 133]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 NY data.
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
● US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-15]
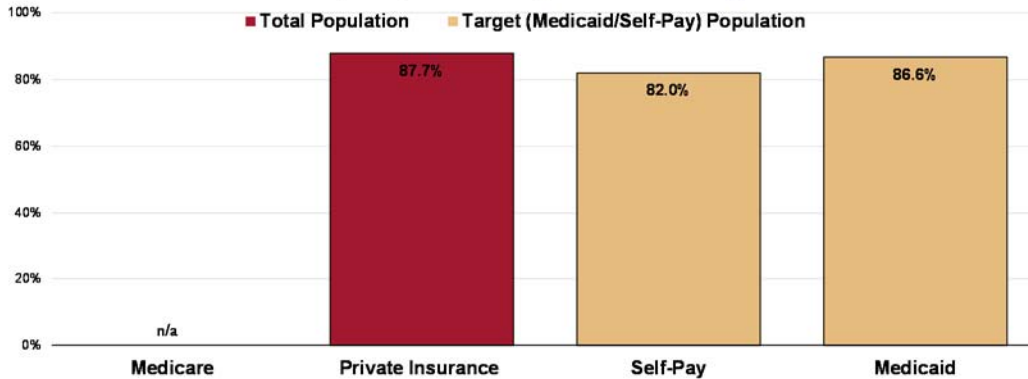Notes: ● Reflects female respondents age 21 to 65.
● *Note that the NY percentage represents all women age 18 and older.

Cervical cancer screenings are higher in the Medicaid and privately insured populations than in the self-pay population.

Have Had a Pap Smear in the Past Three Years
(By Insurance Type, Suffolk County Women Age 21-65; 2014)
### Healthy People 2020 Target = 93.0% or Higher

■ Total Population ■ Target (Medicaid/Self-Pay) Population

	Medicare	Private Insurance	Self-Pay	Medicaid
	n/a	87.7%	82.0%	86.6%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 133]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-15]

Notes:
- Reflects female respondents age 21 to 65.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Colorectal Cancer Screening - Among Suffolk County Total Population adults age 50-75, 71.0% have had an appropriate colorectal cancer screening (fecal occult blood testing within the past year and/or sigmoidoscopy/colonoscopy [lower endoscopy] within the past 10 years). This is similar to national findings and to the Healthy People 2020 target (70.5% or higher). There are similar findings in the Target Population (66.5%).

Have Had a Colorectal Cancer Screening
(Among Adults Age 50-75)
Healthy People 2020 Target = 70.5% or Higher

| Suffolk County Total Population	Suffolk County Target (Medicaid/Self-Pay) Population	US
71.0%	66.5%	75.1%
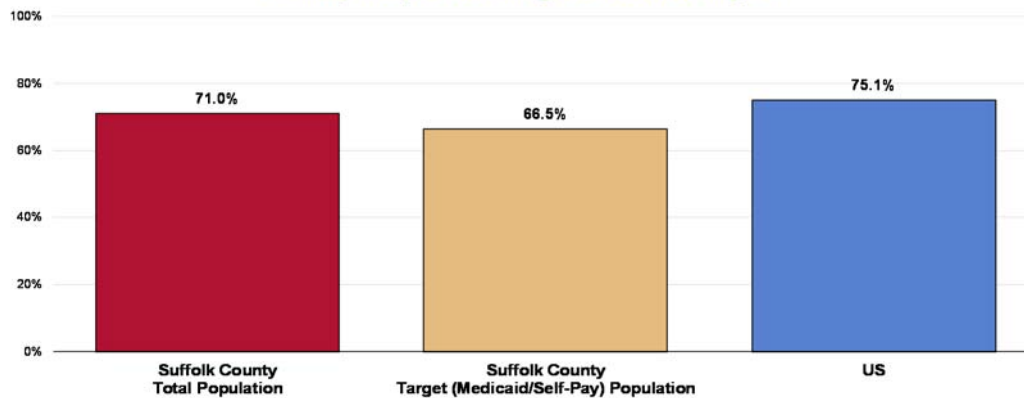
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 136]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective C-16]

Notes:
- Asked of all respondents age 50 through 75.
- In this case, the term "colorectal screening" refers to adults age 50-75 receiving a FOBT (fecal occult blood test) in the past year and/or a lower endoscopy (sigmoidoscopy/colonoscopy) in the past 10 years.

Key Informant Input

A total of 28.3% of Key Informants characterized *cancer* as a "major problem" in the Target Population. A plurality characterized this as a "moderate problem."

**Perceptions of Cancer
as a Problem in the Community for the Target Population**
(Key Informants, 2014)
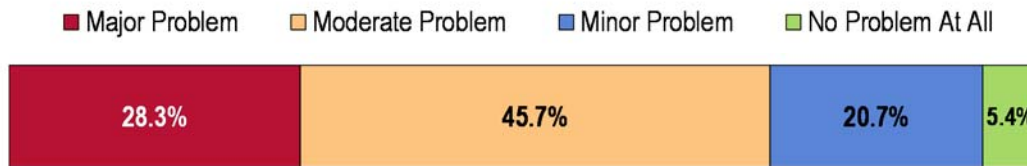
■ Major Problem ☐ Moderate Problem ■ Minor Problem ☐ No Problem At All

| 28.3% | 45.7% | 20.7% | 5.4% |

Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Comments included*:*

> *Lack of access to low, no cost screening services. Lack of cancer prevention and early detection education. Lack of sufficient navigators, public health nurses, workers. Lack of awareness of what Medicaid covers regarding treatment. - Public Health Professional*
> *Environmental factors with increased cancer diagnoses regionally. Need for patient education concerning treatment options and success rates. Limited access to specialty services related to cancer for patients with Medicaid or no insurance. - Other Health Professional*
>
> *I think cancer has been a major concern on Long Island for many years. There has been much concern particularly about breast cancer and it has been thought to have an environmental cause. It is also a problem because of late onset to screenings and poor modifiable lifestyle behaviors. - Public Health Professional*
>
> *High prevalence of smoking, alcohol, drugs. - Physician*
>
> *Lack of education regarding the disease. Fear of the medical system, so there is an avoidance in being screened for early detection and treatment. Lack of free services. - Community/Business Leader*
>
> *High volume diagnosis for CHHA services. High risk for 30 day hospital readmissions. Included in the SCDOH Community Assessment as problem in Suffolk County. - Other Health Professional*
>
> *The literature demonstrates that morbidity and mortality from numerous cancers are higher among the underserved. We have also been able to demonstrate this through our own community-based research projects. - Public Health Professional*

**Respiratory Disease - Findings from the PRC Population and Key Informant Surveys**

Asthma and chronic obstructive pulmonary disease (COPD) are significant public health burdens. Specific methods of detection, intervention, and treatment exist that may reduce this burden and promote health.

Asthma is a chronic inflammatory disorder of the airways characterized by episodes of reversible breathing problems due to airway narrowing and obstruction. These episodes can range in severity from mild to life threatening. Symptoms of asthma include wheezing, coughing, chest tightness, and shortness of breath. Daily preventive treatment can prevent symptoms and attacks and enable individuals who have asthma to lead active lives.

COPD is a preventable and treatable disease characterized by airflow limitation that is not fully reversible. The airflow limitation is usually progressive and associated with an abnormal inflammatory response of the lung to noxious particles or gases (typically from exposure to cigarette smoke). Treatment can lessen symptoms and improve quality of life for those with COPD.

Age-Adjusted Respiratory Disease Deaths
Chronic Lower Respiratory Disease Deaths (CLRD) **-** Between 2009 and 2011, there was an annual average age-adjusted CLRD mortality rate of 33.1 deaths per 100,000 population in Suffolk County. This is less favorable than the rate found statewide, but more favorable than the national rate.
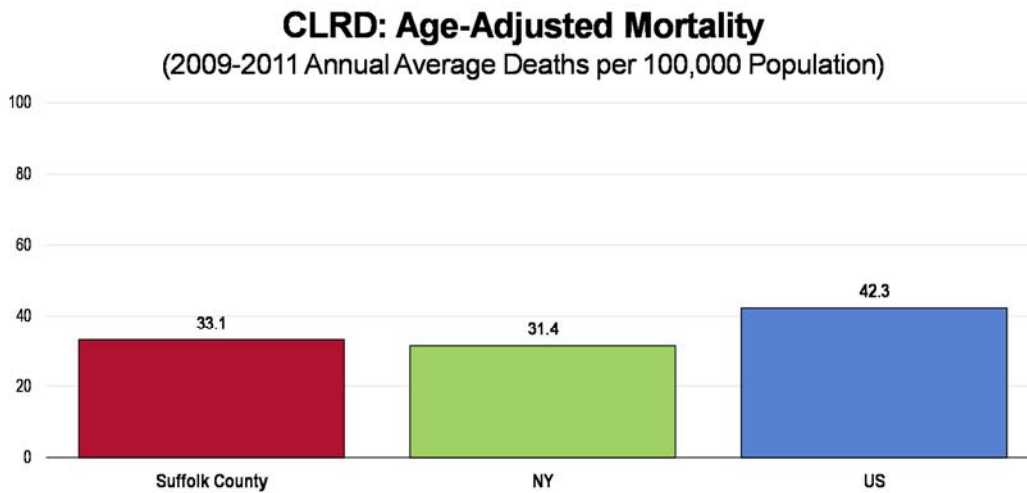
CLRD: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)

Sources: ● CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
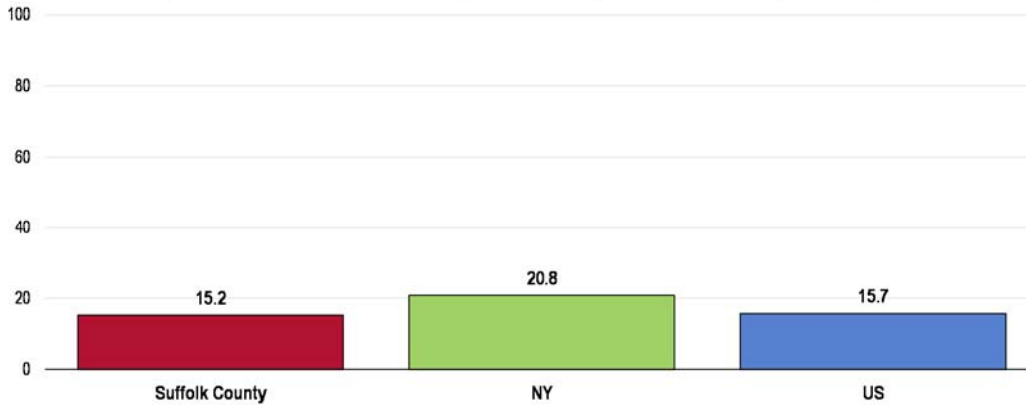Notes: ● Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
● Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.
● Local, state and national data are simple three-year averages.
● CLRD is chronic lower respiratory disease.

Pneumonia/Influenza Deaths

Between 2009 and 2011, there was an annual average age-adjusted pneumonia influenza mortality rate of 15.2 deaths per 100,000 population in Suffolk County. This is better than the statewide rate, and comparable to the national rate.

Pneumonia/Influenza: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)

Sources: • CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
Notes: • Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
• Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.
• Local, state and national data are simple three-year averages.

Chronic Obstructive Pulmonary Disease (COPD) Prevalence

A total of 7.8% of Suffolk County Total Population adults suffer from chronic obstructive pulmonary disease (COPD, including emphysema and bronchitis). This is comparable to the statewide and national prevalence. In the Target Population, 13.7% of adults suffer from COPD. This is much higher than the countywide prevalence and similar by subarea.
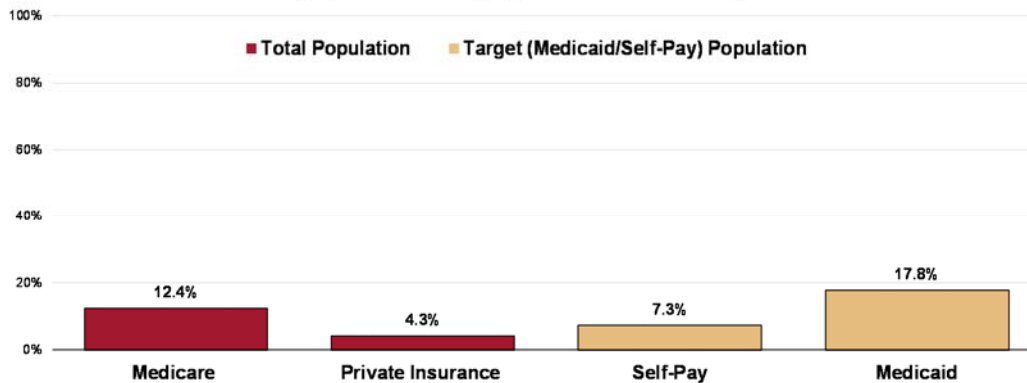
Prevalence of
Chronic Obstructive Pulmonary Disease (COPD)
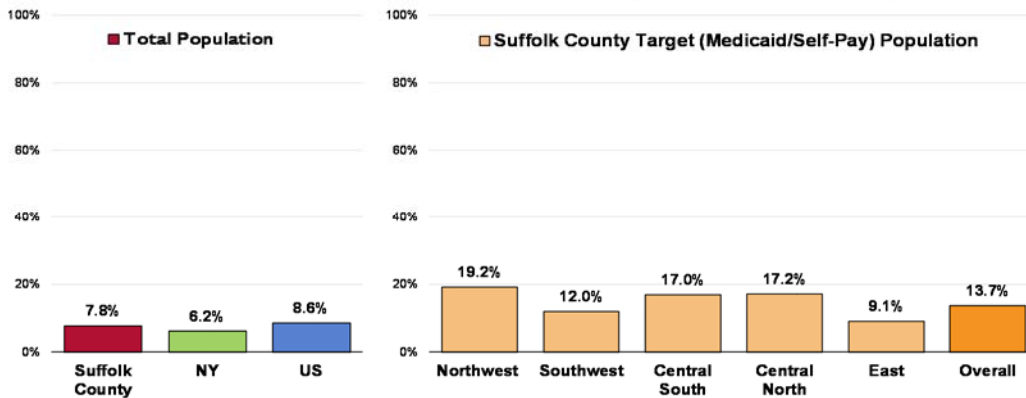
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 26]
• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.
• Includes those having ever suffered from or been diagnosed with COPD or chronic obstructive pulmonary disease, including bronchitis or emphysema.

Viewed by healthcare coverage, the prevalence of COPD is notably higher in the Medicaid and Medicare populations.

Prevalence of Chronic Obstructive Pulmonary Disease (COPD)
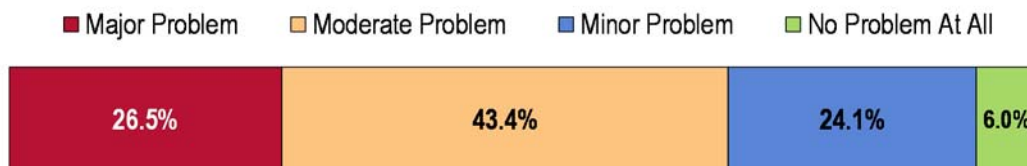### (By Insurance Type, Suffolk County 2014)

■ Total Population   ■ Target (Medicaid/Self-Pay) Population

Medicare	12.4%
Private Insurance	4.3%
Self-Pay	7.3%
Medicaid	17.8%

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 26]
Notes: • Asked of all respondents.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
• Includes those having ever suffered from or been diagnosed with COPD or chronic obstructive pulmonary disease, including bronchitis or emphysema.

Key Informant Input

A total of 26.5% of Key Informants characterized *COPD* as a "major problem" in the Target Population. A plurality characterized this as a "moderate problem."

Perceptions of COPD as a Problem in the Community for the Target Population
(Key Informants, 2014)

■ Major Problem   □ Moderate Problem   ■ Minor Problem   □ No Problem At All

Major Problem	Moderate Problem	Minor Problem	No Problem At All
26.5%	43.4%	24.1%	6.0%

Sources: • PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Comments included:

> *Due to the high use of tobacco, and pollution, and other items of pollution in our air. No wonder people have high C.O.P.D., in our population. - Other Health Professional*
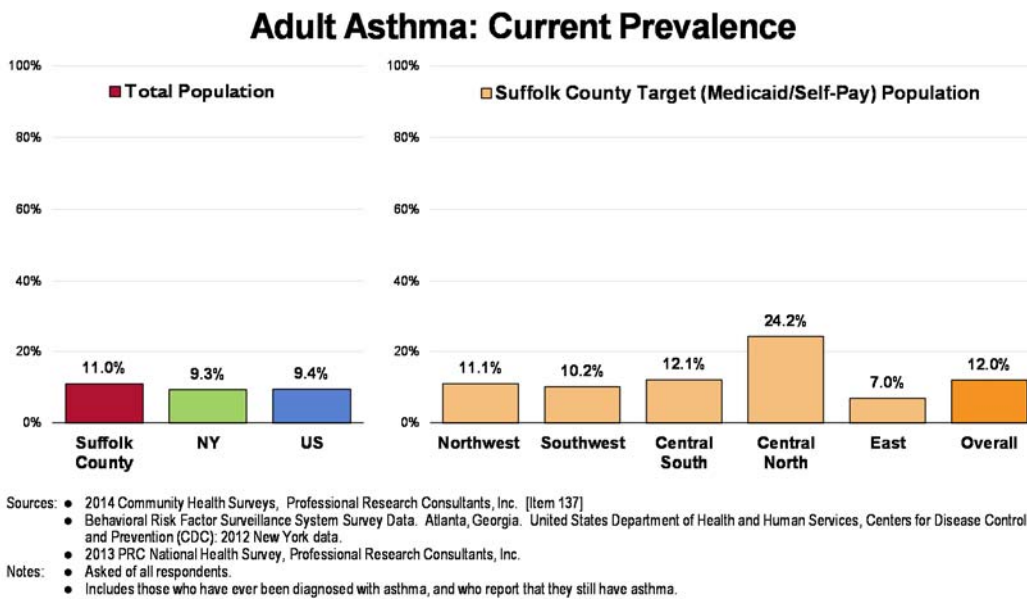
> *High number of smokers. Exposure to respiratory irritants including asbestos and other products. High cost of medications and treatments. Limited access to specialists to effect early treatment. - Other Health Professional*

Due to the co-morbidity of substance abuse and tobacco use there is a predisposition for pulmonary disease and many of the clients we serve have upper respiratory issues including Asthma, chronic bronchitis, COPD, etc. Children are also affected due to second hand smoke inhalation. - Social Service Provider

This is a complex illness, contributes to disability and impairs quality of life, and must be managed effectively through lifestyle changes, ongoing primary and specialty care, monitoring, and self-management. - Public Health Professional

Asthma Prevalence (Adults)
A total of 11.0% of Suffolk County Total Population adults currently suffer from asthma. This is similar to the statewide and national prevalence. A total of 12.0% of residents in the Target Population currently suffer from asthma. This is similar to the countywide prevalence in general, but is unfavorably high in the Central North community.

Adult Asthma: Current Prevalence

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 137]
• Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.
• Includes those who have ever been diagnosed with asthma, and who report that they still have asthma.

Asthma is more prevalent in the Medicare and Medicaid population segments. In the Total Population, asthma is more prevalent among women. In the Target Population, asthma is more prevalent among women and whites.

Adult Asthma: Current Prevalence
(By Insurance Type, Suffolk County 2014)

■ Total Population   ■ Target (Medicaid/Self-Pay) Population

- Medicare: 18.8%
- Private Insurance: 10.1%
- Self-Pay: 6.2%
- Medicaid: 16.3%
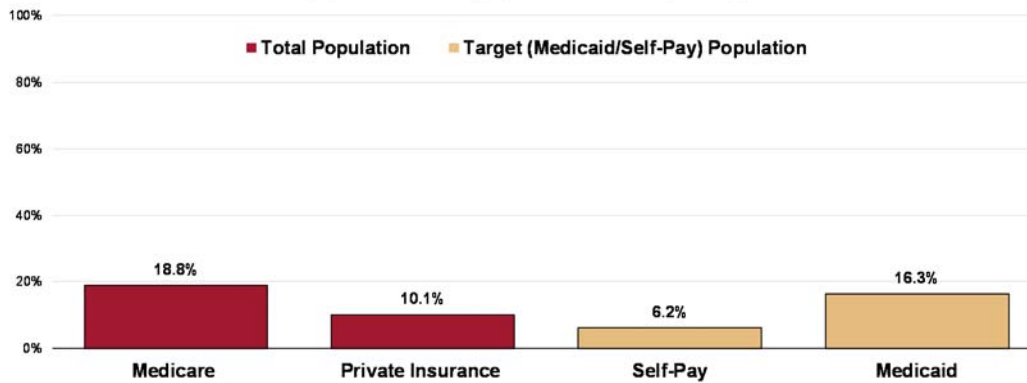
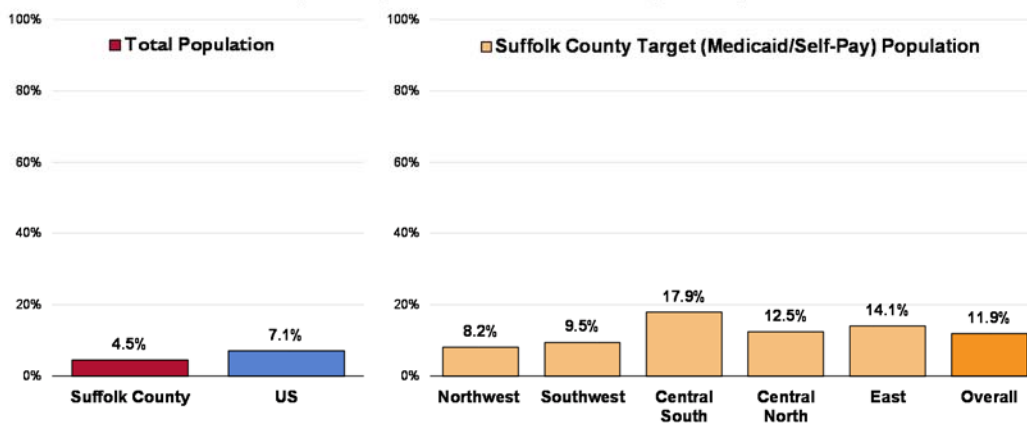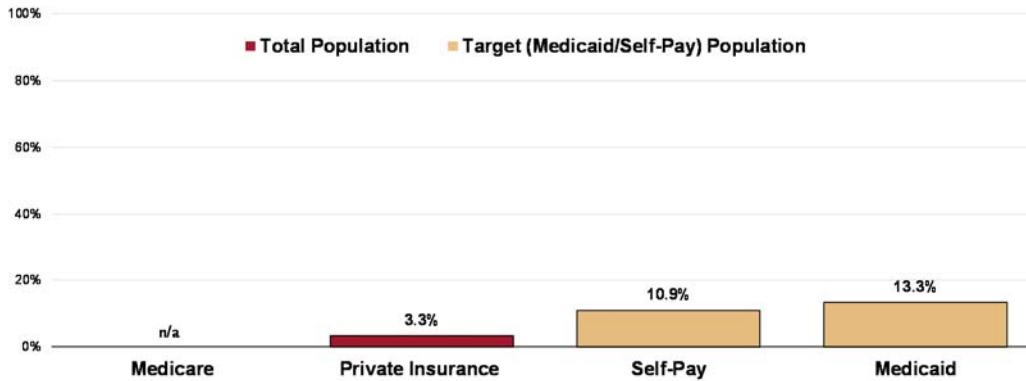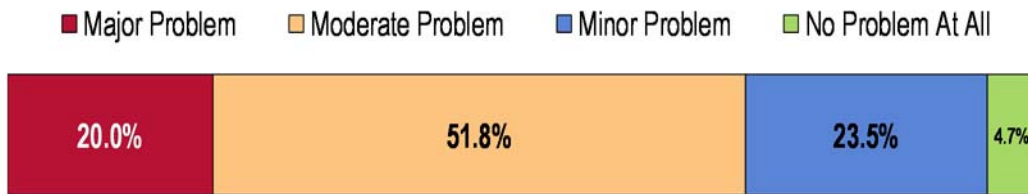Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 137]
Notes: • Asked of all respondents.
  • Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
  • Includes those who have ever been diagnosed with asthma, and who report that they still have asthma.

Asthma Prevalence (Children)

Among the Suffolk County Total Population children under age 18, 4.5% have asthma. The findings are statistically similar to national findings. In the Target Population, 11.9% of children currently have asthma, which is more than twice the countywide prevalence. Findings are statistically similar by subarea.

Childhood Asthma: Current Prevalence
(Among Parents of Children Age 0-17)

■ Total Population   □ Suffolk County Target (Medicaid/Self-Pay) Population

- Suffolk County: 4.5%
- US: 7.1%

- Northwest: 8.2%
- Southwest: 9.5%
- Central South: 17.9%
- Central North: 12.5%
- East: 14.1%
- Overall: 11.9%

Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 138]
  • 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents with children 0 to 17 in the household.
  • Includes children who have ever been diagnosed with asthma, and whom are reported to still have asthma.

Children's Asthma is more prevalent in the Medicaid and uninsured population segments.

Childhood Asthma: Current Prevalence
(By Insurance Type, Suffolk County 2014)

■ Total Population   ■ Target (Medicaid/Self-Pay) Population

Medicare	Private Insurance	Self-Pay	Medicaid
n/a	3.3%	10.9%	13.3%

Key Informant Input

A total of 20.0% of Key Informants characterized asthma as a "major problem" in the Target Population. The largest share of respondents (51.8%) characterized it as a "moderate problem."

Perceptions of Asthma as a Problem in the Community for the Target Population
(Key Informants, 2014)

■ Major Problem   □ Moderate Problem   ■ Minor Problem   □ No Problem At All

Major Problem	Moderate Problem	Minor Problem	No Problem At All
20.0%	51.8%	23.5%	4.7%

Comments included:

> *Exposure to toxins, including cigarette smoke, asbestos, mold, and other environmental triggers at an early age. Poor understanding of disease process, with limited medication and treatment compliance. High cost of medications related to Asthma care. Limited access to pulmonologists for patients on Medicaid or without insurance. - Other Health Professional*

Asthma disproportionately affects low-income child and adult populations in Suffolk County. Adherence to recommended regimens is generally poor-- often due to the patient/family's lack of understanding of recommendations. Asthma is also a major cause of readmissions due to providers' lack of knowledge/adherence to evidence-based recommendations for management. There is also a lack of accurate streamlined data collection and reporting to identify patients who could benefit from disease management support and to identify providers who could benefit from additional education about evidence-based disease management. Data from insurers are notoriously inaccurate in terms attributing patients to the correct providers, vaccine information, services provided, etc. - Public Health Professional

Many of the people that we serve suffer from asthma and continue to engage in unhealthy practices such as smoking. - Social Service Provider

The rates in some communities have risen tremendously over the last 25 years approaching those of the inner city. - Public

Many people suffer from uncontrolled asthma and don't know how to care for themselves. - Social Service Provider

Diabetes - Findings from the PRC Population and Key Informant Surveys

Diabetes mellitus occurs when the body cannot produce or respond appropriately to insulin. Insulin is a hormone that the body needs to absorb and use glucose (sugar) as fuel for the body's cells. Without a properly functioning insulin signaling system, blood glucose levels become elevated and other metabolic abnormalities occur, leading to the development of serious, disabling complications. Many forms of diabetes exist; the three common types are Type 1, Type 2, and gestational diabetes.

Effective therapy can prevent or delay diabetic complications. However, almost 25% of Americans with diabetes mellitus are undiagnosed, and another 57 million Americans have blood glucose levels that greatly increase their risk of developing diabetes mellitus in the next several years. Few people receive effective preventative care, which makes diabetes mellitus an immense and complex public health challenge.

Diabetes mellitus affects an estimated 23.6 million people in the United States and is the 7th leading cause of death. Diabetes mellitus lowers life expectancy by up to 15 years; increases the risk of heart disease by 2 to 4 times; and is the leading cause of kidney failure, lower limb amputations, and adult-onset blindness. In addition to these human costs, the estimated total financial cost of diabetes mellitus in the US in 2007 was $174 billion, which includes the costs of medical care, disability, and premature death. The rate of diabetes mellitus continues to increase both in the United States and throughout the world. Due to the steady rise in the number of persons with diabetes mellitus, and possibly earlier onset of type 2 diabetes mellitus, there is growing concern about the possibility that the increase in the number of persons with diabetes mellitus and the complexity of their care might overwhelm existing healthcare systems. People from minority populations are more frequently affected by type 2 diabetes. Minority groups constitute 25% of all adult patients with diabetes in the US and represent the majority of children and adolescents with type 2 diabetes.   Lifestyle change has been proven effective in preventing or delaying the onset of type 2 diabetes in high-risk individuals.

– Healthy People 2020 (www.healthypeople.gov)
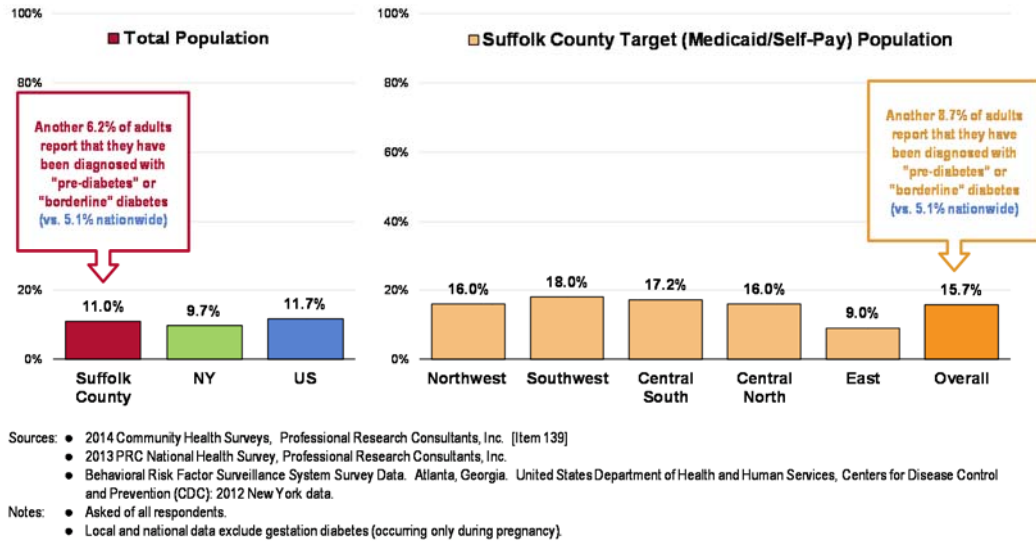
Age-Adjusted Diabetes Deaths

Between 2009 and 2011, there was an annual average age-adjusted diabetes mortality rate of 13.0 deaths per 100,000 population in Suffolk County. This is more favorable than that found both statewide and nationally. It satisfies the Healthy People 2020 target (20.5 or lower).
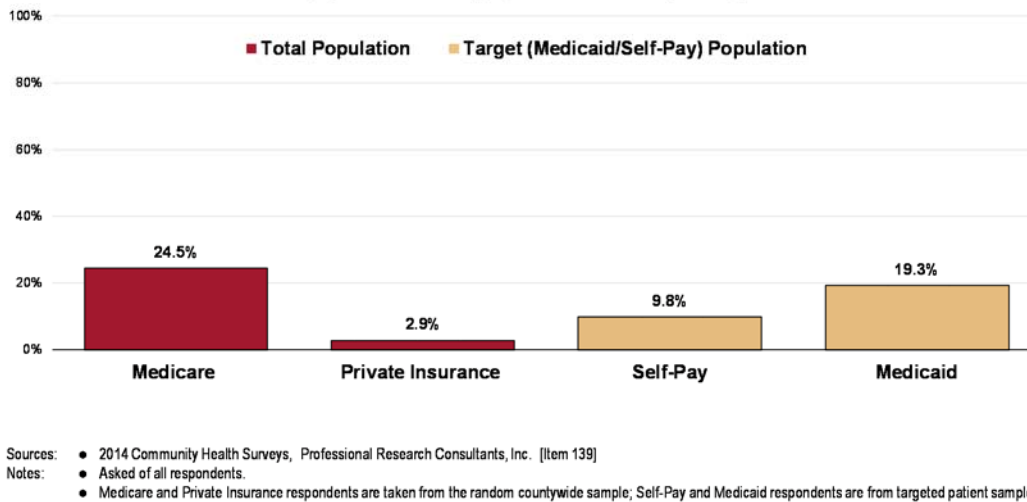
Diabetes: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)
Healthy People 2020 Target = 20.5 or Lower (Adjusted)

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective D-3]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.
- Local, state and national data are simple three-year averages.
- The Healthy People 2020 target for Diabetes is adjusted to account for only diabetes mellitus coded deaths.

Prevalence of Diabetes

A total of 11.0% of Suffolk County Total Population adults report having been diagnosed with diabetes. This is similar to the statewide and national proportion. In the Target Population, 15.7% of adults have been diagnosed with diabetes, a number that is less favorable than the countywide proportion. It is favorably low in the East. In addition to the prevalence of diagnosed diabetes referenced above, another 6.2% of Suffolk County Total Population adults report that they have "pre-diabetes" or "borderline diabetes" (the prevalence is 8.7% in the Target Population).

Prevalence of Diabetes

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 139]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.

Notes:
- Asked of all respondents.
- Local and national data exclude gestation diabetes (occurring only during pregnancy).

Viewed by insurance coverage, diabetes is highest in the Medicare and Medicaid populations; persons without any coverage are also more likely than those with private insurance to be diabetic.

Prevalence of Diabetes
(By Insurance Type, Suffolk County 2014)

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 139]

Notes:
- Asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Of Suffolk County Total Population adults who have _not_ been diagnosed with diabetes, 56.2% report having had their blood sugar level tested within the past three years. This is higher than the national proportion. Among Target Population adults who have _not_ been diagnosed with diabetes, 51.8% report

having had their blood sugar level tested within the past three years. This is comparable to the countywide proportion and statistically similar by subarea.

Have Had Blood Sugar Tested in the Past Three Years
(Among Non-Diabetics)
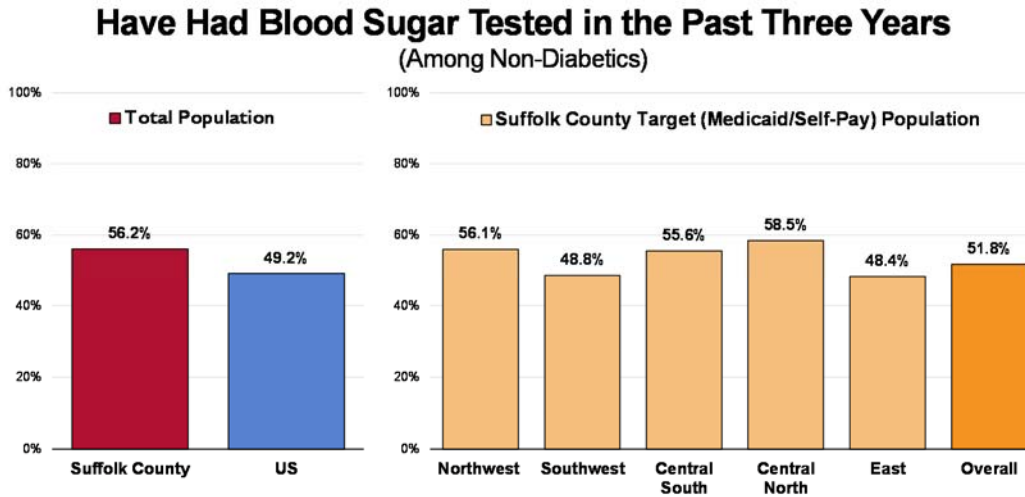
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 41]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of respondents who have not been diagnosed with diabetes.

Viewed by coverage, the prevalence of diabetes testing is higher in the Medicare and Medicaid populations.

Have Had Blood Sugar Tested in the Past Three Years
(Among Non-Diabetics; By Insurance Type, Suffolk County, 2014)
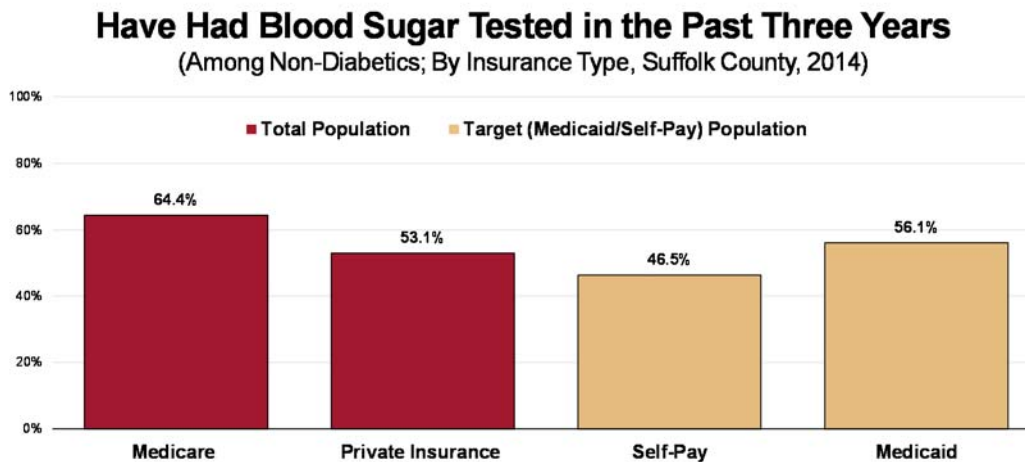
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 41]
Notes: ● Asked of respondents who have not been diagnosed with diabetes.
● Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Key Informant Input
 A total of 44.4% of Key Informants characterized *diabetes* as a "major problem" in the Target Population. A plurality characterized it as a "moderate problem."

Perceptions of Diabetes
as a Problem in the Community for the Target Population
(Key Informants, 2014)

■ Major Problem   ☐ Moderate Problem   ■ Minor Problem   ☐ No Problem At All

44.4%	46.7%	7.8%	1.1%

Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Comments included:

Diet, lack of exercise, poor understanding of the impact of this illness. Not checking their blood sugar regularly and accessing primary care on a regular basis. - Other Health Professional

Access to fresh produce, access to safe walking trails. Information about healthy eating and practical shopping tips, recipe makeovers. Cost of medications, diabetes prevention education, information about the impact of diabetes on long-term health. - Public Health Professional

Lack of education and access to medication and testing equipment. - Community/Business Leader

Lack of diabetes prevention program. Lack of diabetes screening and referrals. Lack of education and support for patients and family caregiver. Economic barriers with cost of glucose testing. Lack of culturally appropriate nutritional counseling. Link health care based efforts with community prevention activities. Lack of certified diabetic educators in the community setting. - Other Health Professional

Access to good primary care providers is one of the biggest challenges. Another challenge is access to healthy inexpensive foods for an increasingly obese population. - Physician

Not seeking adequate medical care to monitor sugar levels. Not getting proper medication and adhering to medication regimen. Proper diet and nutrition. Obesity. Lack of education and awareness surrounding severity of this illness. - Social Service Provider

For those with a behavioral health issue, integrating care for diabetes into a comprehensive plan. Medications and behaviors tend to exacerbate diabetes. - Other Health Professional

Kidney Disease - Findings from the PRC Population and Key Informant Surveys

Chronic kidney disease and end-stage renal disease are significant public health problems in the United States and a major source of suffering and poor quality of life for those afflicted. They are responsible for premature death and exact a high economic price from both the private and public sectors. Nearly 25% of the Medicare budget is used to treat people with chronic kidney disease and end-stage renal disease. Genetic determinants have a large influence on the development and progression of chronic kidney disease. It is not possible to alter a person's biology and genetic determinants; however, environmental

influences and individual behaviors also have a significant influence on the development and progression of chronic kidney disease. As a result, some populations are disproportionately affected. Successful behavior modification is expected to have a positive influence on the disease.   diabetes is the most common cause of kidney failure. The results of the diabetes Prevention Program (DPP) funded by the national Institute of diabetes and Digestive and Kidney Diseases (NIDDK) show that moderate exercise, a healthier diet, and weight reduction can prevent development of type 2 diabetes in persons at risk.

 – Healthy People 2020 (www.healthypeople.gov)

Age-Adjusted Kidney Disease Deaths
Between 2009 and 2011 there was an annual average age-adjusted kidney disease mortality rate of 15.5 deaths per 100,000 population in Suffolk County. This is less favorable than the rate found both statewide and nationally.
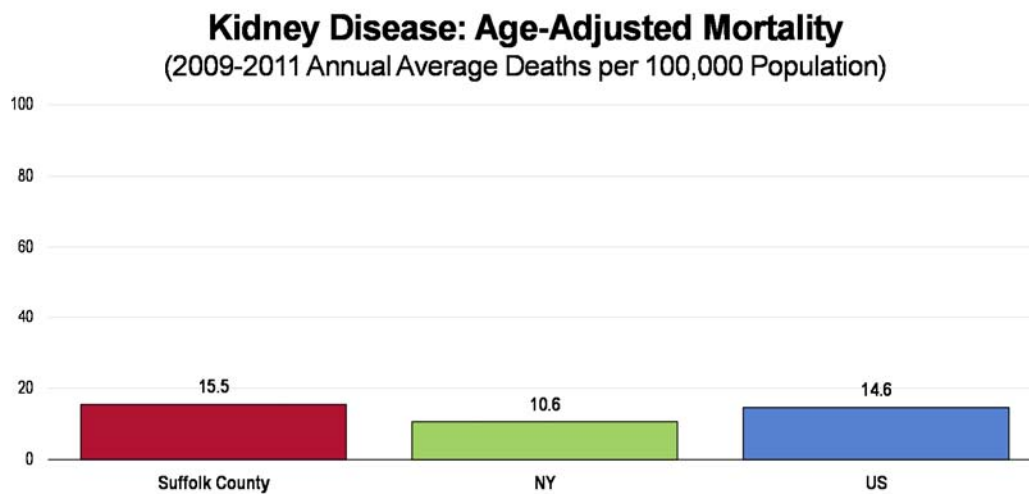
Kidney Disease: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)

Sources: • CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
Notes: • Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
              • Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.
              • Local, state and national data are simple three-year averages.

Prevalence of Kidney Disease
A total of 5.4% of Suffolk County Total Population adults report having been diagnosed with kidney disease. This is less favorable than the New York proportion, but similar to the US proportion. In the Target Population, 7.4% of adults have been diagnosed with kidney disease. This is similar to the Suffolk County Total Population prevalence, and favorably low in the Northwest.

Prevalence of Kidney Disease
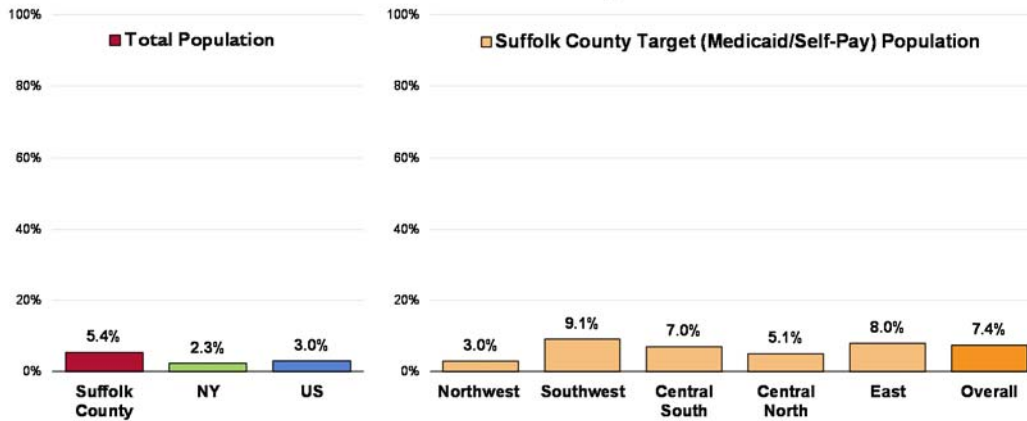
Total Population

- Suffolk County: 5.4%
- NY: 2.3%
- US: 3.0%

Suffolk County Target (Medicaid/Self-Pay) Population

- Northwest: 3.0%
- Southwest: 9.1%
- Central South: 7.0%
- Central North: 5.1%
- East: 8.0%
- Overall: 7.4%

Viewed by insurance coverage, kidney disease is most often noted in the Medicare population, followed by Medicaid recipients.

Prevalence of Kidney Disease
(By Insurance Type, Suffolk County 2014)
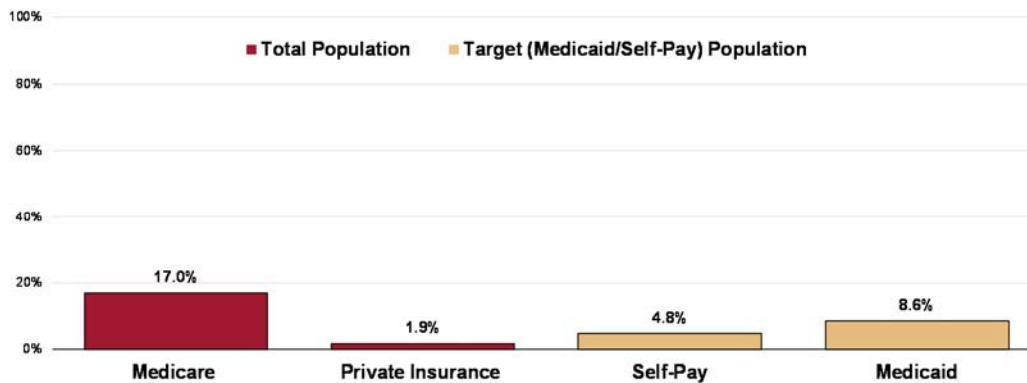
Total Population / Target (Medicaid/Self-Pay) Population

- Medicare: 17.0%
- Private Insurance: 1.9%
- Self-Pay: 4.8%
- Medicaid: 8.6%

Key Informant Input

A total of 14.1% of Key Informants characterized *Chronic Kidney Disease* as a "major problem" in the Target Population. Responses were largely divided between "moderate" and "minor" ratings.

Perceptions of Chronic Kidney Disease
as a Problem in the Community for the Target Population
(Key Informants, 2014)
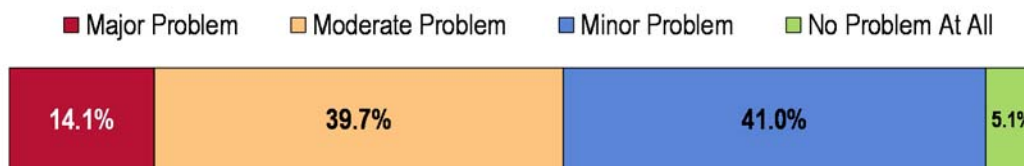
■ Major Problem   □ Moderate Problem   ■ Minor Problem   □ No Problem At All

14.1%	39.7%	41.0%	5.1%

Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Comments included:

Lack of awareness, education and outreach services. - Public Health Professional

High volume of diabetes with resultant kidney disease. High volume of hypertension due to diet with resultant kidney disease. - Other Health Professional

Statistics relating to African-Americans. - Public Health Professional

Demographics. Aging baby-boomers, lack of kidney transplants available, good healthcare that allows those with kidney disease to live to older ages. - Other Health Professional

There are underserved adults with kidney disease who are not receiving treatment because they have no access to care. - Physician

HIV/AIDS - **Findings from the PRC Population and Key Informant Surveys**

The HIV epidemic in the United States continues to be a major public health crisis. An estimated 1.1 million Americans are living with HIV, and 1 in 5 people with HIV do not know they have it. HIV continues to spread, leading to about 56,000 new HIV infections each year. HIV is a preventable disease, and effective HIV prevention interventions have been proven to reduce HIV transmission. People who get tested for HIV and learn that they are infected can make significant behavior changes to improve their health and reduce the risk of transmitting HIV to their sex or drug-using partners. More than 50% of new HIV infections occur as a result of the 21% of people who have HIV but do not know it. In the era of increasingly effective treatments for HIV, people with HIV are living longer, healthier, and more productive lives. Deaths from HIV infection have greatly declined in the United States since the 1990s. As the number of people living with HIV grows, it will be more important than ever to increase national HIV prevention and healthcare programs. Public perception in the US about the seriousness of the HIV epidemic has declined in recent years. There is evidence that risky behaviors may be increasing among uninfected people, especially gay and bisexual men. Ongoing media and social campaigns for the general public and HIV prevention interventions for uninfected persons who engage in risky behaviors are critical.
    – Healthy People 2020 (www.healthypeople.gov)

HIV Mortality

Between 2009 and 2011, the age-adjusted HIV death rate in Suffolk County was 3.1 per 100,000 population. This is much more favorable than the statewide rate and more favorable than the national rate.

HIV/AIDS: Age-Adjusted Mortality
(2009-2011 Annual Average Deaths per 100,000 Population)
Healthy People 2020 Target = 3.3 or Lower
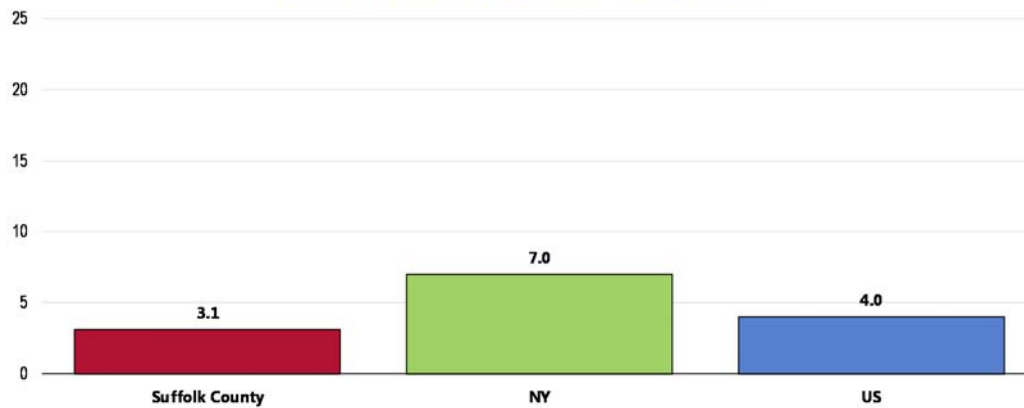
Suffolk County	NY	US
3.1	7.0	4.0

Sources:
- CDC WONDER Online Query System. Centers for Disease Control and Prevention, Epidemiology Program Office, Division of Public Health Surveillance and Informatics. Data extracted August 2014.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective HIV-12]

Notes:
- Deaths are coded using the Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10).
- Rates are per 100,000 population, age-adjusted to the 2000 U.S. Standard Population.

HIV Prevalence

In 2010, there was a prevalence of 227.6 HIV cases per 100,000 population. This is much more favorable than the statewide rate and more favorable than the national rate.

HIV Prevalence
(Prevalence Rate of HIV per 100,000 Population, 2010)
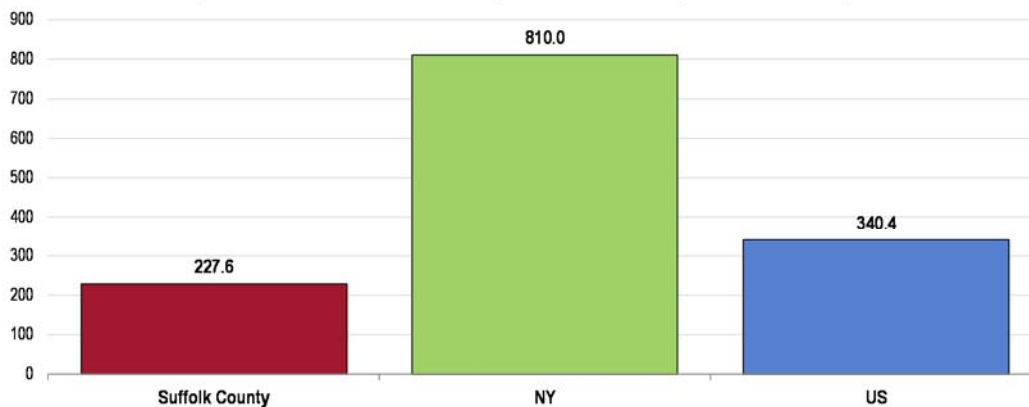
Suffolk County	NY	US
227.6	810.0	340.4

Sources:
- Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: 2010.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because HIV is a life-threatening communicable disease that disproportionately affects minority populations and may also indicate the prevalence of unsafe sex practices.

By race and ethnicity, HIV/AIDS incidence in Suffolk County is particularly high among non-Hispanic Blacks, although to a lesser degree than found statewide or nationally.

HIV Prevalence Rate by Race/Ethnicity
(Prevalence Rate of HIV per 100,000 Population, 2010)

Sources:
- Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: 2010.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because HIV is a life-threatening communicable disease that disproportionately affects minority populations and may also indicate the prevalence of unsafe sex practices.

Key Informant Input

A total of 17.0% of Key Informants characterized *HIV/AIDS* as a "major problem" in the Target Population. Over 36% gave "moderate" or "minor" responses.

Perceptions of HIV/AIDS
as a Problem in the Community for the Target Population
(Key Informants, 2014)

Sources:
- PRC Online Key Informant Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
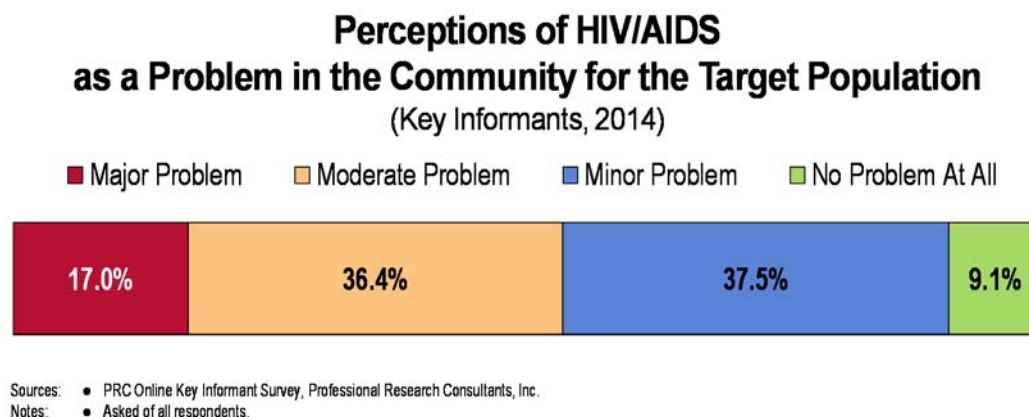
Comments included:

> *We have recently seen a significant upsurge in clients accessing care with Hepatitis C due to IV drug use. Long Island has been identified as a region with high incidence of individuals that are HIV positive. - Social Service Provider*

> *Based on NYS Department of Health Community Health Indicator Reports. - Public Health*

Higher incidence in populations with substance abuse, criminal justice. - Community/Business Leader

A lot of focus has been taken off contracting the disease. We have come a long way in terms of medication that makes the virus undetectable in the blood stream, but more focus is needed on prevention. - Other Health Professional

Poor and disadvantaged have problems with access to treatment. - Other Health Professional

Maternal and Child Health - Findings from the PRC Population and Key Informant Surveys

Improving the well-being of mothers, infants, and children is an important public health goal for the US. Their well-being determines the health of the next generation and can help predict future public health challenges for families, communities, and the healthcare system. The risk of maternal and infant mortality and pregnancy-related complications can be reduced by increasing access to quality preconception (before pregnancy) and inter-conception (between pregnancies) care. Moreover, healthy birth outcomes and early identification and treatment of health conditions among infants can prevent death or disability and enable children to reach their full potential. Many factors can affect pregnancy and childbirth, including pre-conception health status, age, access to appropriate healthcare, and poverty. Infant and child health are similarly influenced by socio-demographic factors, such as family income, but are also linked to the physical and mental health of parents and caregivers. There are racial and ethnic disparities in mortality and morbidity for mothers and children, particularly for African Americans. These differences are likely the result of many factors, including social determinants (such as racial and ethnic disparities in infant mortality; family income; educational attainment among household members; and health insurance coverage) and physical determinants (i.e., the health, nutrition, and behaviors of the mother during pregnancy and early childhood).

– Healthy People 2020 (www.healthypeople.gov)

Analysis of public health datasets shows that Suffolk County fares well in maternal and perinatal outcomes in comparison to both statewide and statewide excluding NYC outcomes. Among the total population, infant death rates (3.8/1,000), neonatal death rates (2.4/1,000), post neonatal death rates (1.3/1,000) and perinatal death rates (5.3/1,000) fall below statewide benchmarks.[109] However, in the younger age groups (age 15-24), the early prenatal care rate falls below state benchmarks. [110] The low birth weight rate (7.7%) is lower than the full statewide rate, but above the NYS rate excluding NYC. [111] The maternal mortality rate is also lower than the statewide rate.[112] Between 2006 and 2012, there was an annual average of 16.1 births to women age 15-19 per 1,000 in that age group. This is well below the New York and national rates. Still, there is room for improvement to HP 2020 targets and in regard to specific subpopulations.[113]

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[109] New York State Department of Health [NYSDOH]. (2014, April). Infant Deaths, Neonatal Deaths, Post Neonatal Deaths, and Perinatal Mortality by Resident County New York State – 2012. Retrieved October 14, 2014 from: http://www.health.ny.gov/statistics/vital_statistics/2012/table45.htm
[110] New York State Department of Health [NYSDOH]. (2014, April). Table 12a: Percent^ Early and Late or No Prenatal Care, Age and Resident County New York State– 2012. Retrieved October 14, 2014 from: http://www.health.ny.gov/statistics/vital_statistics/2012/table12a.htm
[111] New York State Department of Health [NYSDOH]. (2014, April). Table 11: Low Birthweight Live Births (<2500 grams) by Mother's Age and Resident County New York State - 2012. Retrieved October 14, 2014 from: http://www.health.ny.gov/statistics/vital_statistics/2012/table11.htm
[112] New York State Department of Health [NYSDOH]. (2014, February). Maternal mortality rate per 100,000 live births. Retrieved October 14, 2014 from: http://www.health.ny.gov/statistics/chac/birth/b33.htm
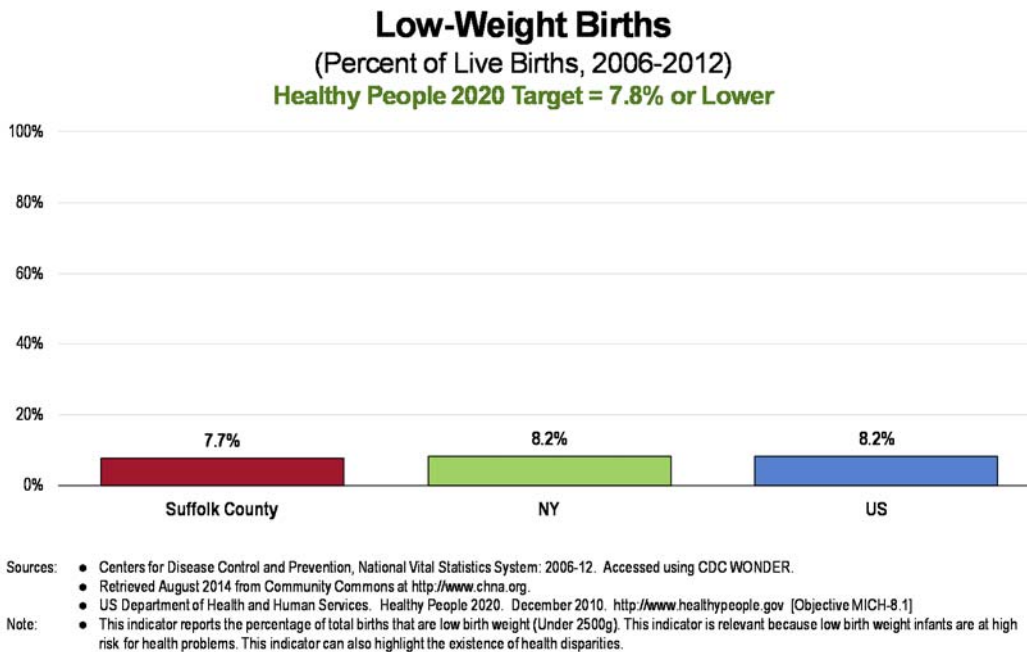[113] New York State Prevention Agenda 2013-2017

Prenatal Care

Between 2007 and 2010, 24.2% of Suffolk County births did not receive prenatal care in the first trimester of pregnancy. This is higher than both the New York and the US proportions. It fails to satisfy the Healthy People 2020 target (22.1% or lower).
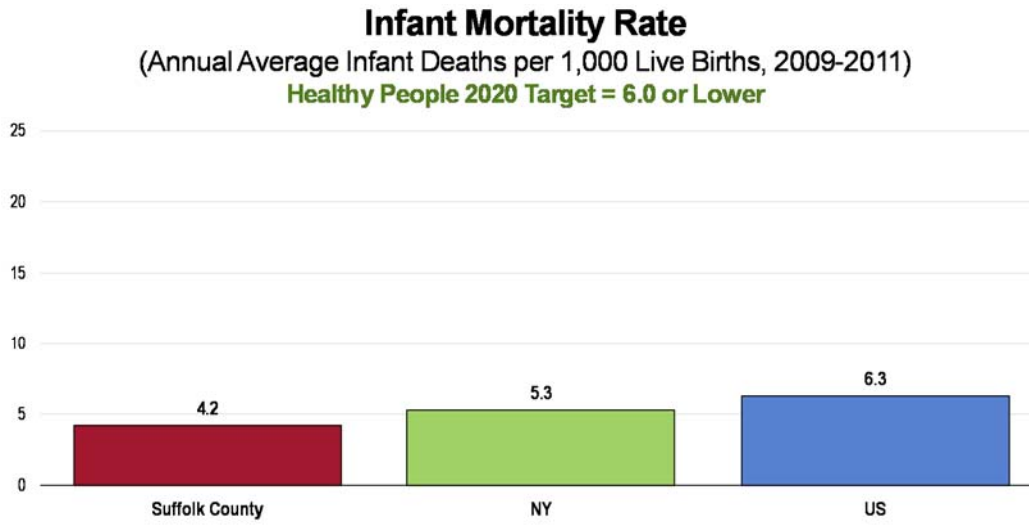
Lack of Prenatal Care in the First Trimester
(Percentage of Live Births, 2007-2010)
Healthy People 2020 Target = 22.1% or Lower

	Suffolk County	NY	US
	24.2%	21.9%	17.3%

Sources:
- National Vital Statistics System: 2007-2010. Data retrieved August 2014.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-10.1]

Note:
- This indicator reports the percentage of women who do not obtain prenatal care during their first trimester of pregnancy. This indicator is relevant because engaging in prenatal care decreases the likelihood of maternal and infant health risks. This indicator can also highlight a lack of access to preventive care, a lack of health, knowledge insufficient provider outreach, and/or social barriers preventing utilization of services.

Low-Weight Births

A total of 7.7% of 2006-2012 Suffolk County births were low-weight. This is below the proportion statewide and nationally. It is close to the Healthy People 2020 target (7.8% or lower).

Low-Weight Births
(Percent of Live Births, 2006-2012)
Healthy People 2020 Target = 7.8% or Lower

	Suffolk County	NY	US
	7.7%	8.2%	8.2%

Sources:
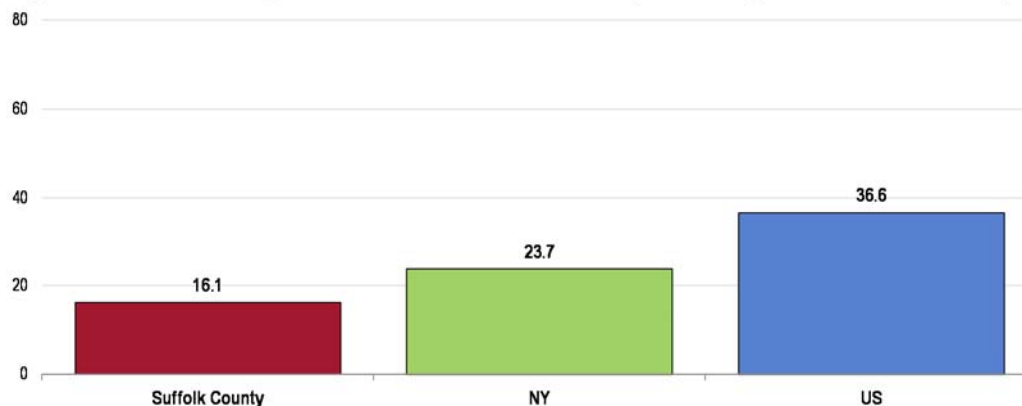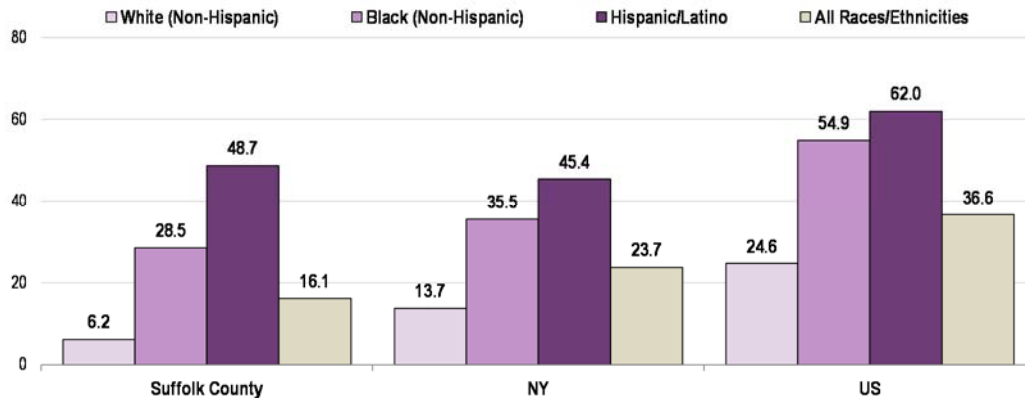- Centers for Disease Control and Prevention, National Vital Statistics System: 2006-12. Accessed using CDC WONDER.
- Retrieved August 2014 from Community Commons at http://www.chna.org.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-8.1]

Note:
- This indicator reports the percentage of total births that are low birth weight (Under 2500g). This indicator is relevant because low birth weight infants are at high risk for health problems. This indicator can also highlight the existence of health disparities.

Infant Mortality

Between 2009 and 2011, there was an annual average of 4.2 infant deaths per 1,000 live births in Suffolk County. This is more favorable than the New York and national rates. It satisfies the Healthy People 2020 target of 6.0 per 1,000 live births.

Infant Mortality Rate
(Annual Average Infant Deaths per 1,000 Live Births, 2009-2011)
Healthy People 2020 Target = 6.0 or Lower

	Suffolk County	NY	US
Rate	4.2	5.3	6.3

Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System: 2009-11. Accessed using CDC WONDER.
- Retrieved August 2014 from Community Commons at http://www.chna.org.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective MICH-1.3]

Notes:
- Infant deaths include deaths of children under 1 year old.
- This indicator is relevant because high rates of infant mortality indicate the existence of broader issues pertaining to access to care and maternal and child health.

Key Informant Input

A total of 18.3% of Key Informants characterized *Infant and Child Health* as a "major problem" in the Target Population. A plurality characterized this as a "moderate problem."

Perceptions of Infant and Child Health as a Problem in the Community for the Target Population
(Key Informants, 2014)

Legend: ■ Major Problem ☐ Moderate Problem ■ Minor Problem ☐ No Problem At All

Major Problem	Moderate Problem	Minor Problem	No Problem At All
18.3%	34.1%	26.8%	20.7%

Sources:
- PRC Online Key Informant Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
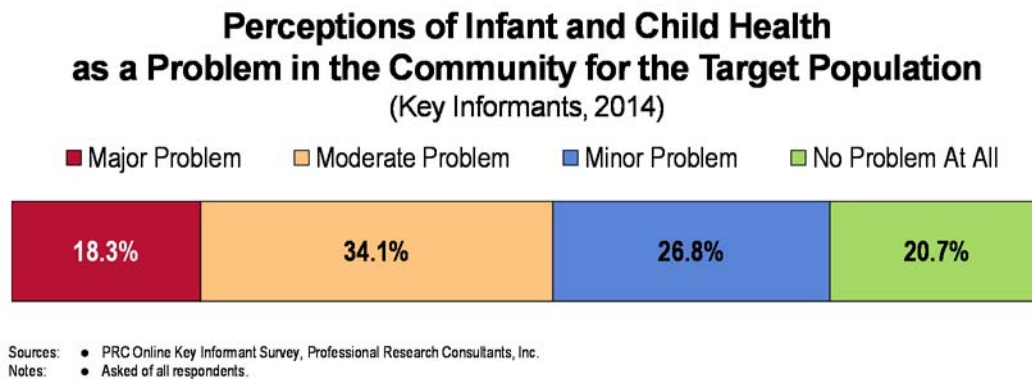
Comments included:

> *Infant mortality in the region is higher than expected. There are not enough specialty centers to treat infants and children and the cost is high. Insurance coverage is low. - Public Health Professional*

> *Significant Infant Mortality rates for African Americans. - Public Health Professional*

Medicaid is the largest single insurer for infants and children in Suffolk County and the nation. Suffolk County children have increasing rates of inadequate vaccination. In addition, asthma, obesity, and mental, behavioral health problems disproportionately affect Medicaid insured children in Suffolk County. Investing early in promoting child health and development is known to have positive impact across the lifespan, yet resources to address these issues are woefully scarce in Suffolk County. Parents and caregivers require support with navigating our complex and fragmented health care system to better meet their individual child's health needs. - Public Health Professional

Mothers fail to get adequate prenatal care. Children are not covered by insurance or they are afraid to go for services. - Community/Business Leader

Limited access to services. Limited access to transportation. Limited access to child care services. Poor education concerning infant and child care. High teen birth rate, limited two parent family structure. Families unsure regarding how to access coverage and needed services. - Other Health Professional

Many mothers are children themselves and many are un or under educated with multiple problems including language barriers, substance abuse, psychiatric problems, domestic violence, socio-economic issues, lack of day care, single moms. - Public Health Professional

Births to Teen Mothers
The negative outcomes associated with unintended pregnancies are compounded for adolescents. Teen mothers:

- Are less likely to graduate from high school or attain a GED by the time they reach age 30.
- Earn an average of approximately $3,500 less per year, when compared with those who delay childbearing.
- Receive nearly twice as much Federal aid for nearly twice as long.

Similarly, early fatherhood is associated with lower educational attainment and lower income. Children of teen parents are more likely to have lower cognitive attainment and exhibit more behavior problems. Sons of teen mothers are more likely to be incarcerated, and daughters are more likely to become adolescent mothers.

– Healthy People 2020 (www.healthypeople.gov)

Between 2006 and 2012, there was an annual average of 16.1 births to women age 15-19 per 1,000 population in that age group. This is well below the New York and national rates.

Teen Birth Rate
(Births to Women Age 15-19 Per 1,000 Female Population Age 15-19, 2006-2012)

By race and ethnicity, Hispanics/Latinos exhibit the highest teen birth rate in Suffolk County (as is also found statewide and nationally), followed by non-Hispanic Blacks.

Teen Birth Rate
(Births to Women Age 15-19 Per 1,000 Female Population Age 15-19, 2006-2012)

By race and ethnicity, Hispanics/Latinos exhibit the highest teen birth rate in Suffolk County (as is also found statewide and nationally), followed by non-Hispanic Blacks.

Teen Birth Rate
(Births to Women Age 15-19 Per 1,000 Female Population Age 15-19; Suffolk County by Race/Ethnicity, 2006-2012)

□ White (Non-Hispanic) ▨ Black (Non-Hispanic) ■ Hispanic/Latino □ All Races/Ethnicities

Suffolk County: 6.2, 28.5, 48.7, 16.1
NY: 13.7, 35.5, 45.4, 23.7
US: 24.6, 54.9, 62.0, 36.6

Sources:
- Centers for Disease Control and Prevention, National Vital Statistics System: 2006-2012. Accessed using CDC WONDER.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the rate of total births to women under the age of 15-19 per 1,000 female population age 15-19. This indicator is relevant because in many cases, teen parents have unique social, economic, and health support services. Additionally, high rates of teen pregnancy may indicate the prevalence of unsafe sex practices.

Modifiable Risk Factors/Actual Causes of Death - Findings from the PRC Population and Key Informant Surveys

A 1999 study (an update to a landmark 1993 study), estimated that as many as 40% of premature deaths in the United States are attributed to behavioral factors. This study found that behavior patterns represent the single-most prominent domain of influence over health prospects in the United States. The daily choices we make with respect to diet, physical activity, and sex; the substance abuse and addictions to which we fall prey; our approach to safety; and our coping strategies in confronting stress are all important determinants of health.

The most prominent contributors to mortality in the United States in 2000 were tobacco (an estimated 435,000 deaths), diet and activity patterns (400,000), alcohol (85,000), microbial agents (75,000), toxic agents (55,000), motor vehicles (43,000), firearms (29,000), sexual behavior (20,000), and illicit use of drugs (17,000). Socioeconomic status and access to medical care are also important contributors, but difficult to quantify independent of the other factors cited. Because the studies reviewed used different approaches to derive estimates, the stated numbers should be viewed as first approximations.
These analyses show that smoking remains the leading cause of mortality. However, poor diet and physical inactivity may soon overtake tobacco as the leading cause of death. These findings, along with escalating healthcare costs and aging population, argue persuasively that the need to establish a more preventive orientation in the US healthcare and public health systems has become more urgent. [114]

Strong science exists supporting the health benefits of eating a healthful diet and maintaining a healthy body weight. Efforts to change diet and weight should address individual behaviors, as well as the policies and environments that support these behaviors in settings such as schools, worksites, healthcare organizations, and communities.

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[114] Ali H. Mokdad, PhD; James S. Marks, MD, MPH; Donna F. Stroup, Phd, MSc; Julie L. Gerberding, MD, MPH. "Actual Causes of Death in the United States." JAMA, 291(2004):1238-1245.

The goal of promoting healthful diets and healthy weight encompasses increasing household food security and eliminating hunger. Americans with a healthful diet:

- Consume a variety of nutrient-dense foods within and across the food groups, especially whole grains, fruits, vegetables, low-fat or fat-free milk or milk products, and lean meats and other protein sources.
- Limit the intake of saturated and trans fats, cholesterol, added sugars, sodium (salt), alcohol and calories.

Factors Contributing to Premature Deaths in the United States
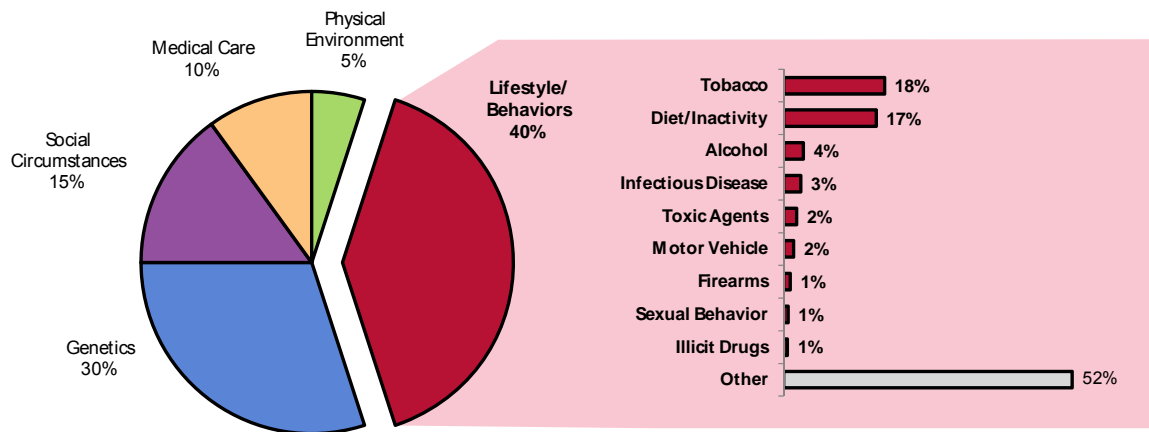
Sources: "The Case For More Active Policy Attention to Health Promotion"; (McGinnis, Williams-Russo, Knickman) Health Affairs, Vol. 21, No. 2, March/April 2002.
"Actual Causes of Death in the United States"; (Ali H. Mokdad, PhD; James S. Marks, MD, MPH; Donna F. Stroup, Phd, MSc; Julie L. Gerberding, MD, MPH) JAMA, 291(2000):1238-1245.

Diet and body weight are related to health status. Good nutrition is important to the growth and development of children. A healthful diet also helps Americans reduce their risks for many health conditions, including: overweight and obesity; malnutrition; iron-deficiency anemia; heart disease; high blood pressure; dyslipidemia (poor lipid profiles); type 2 diabetes; osteoporosis; oral disease; constipation; diverticular disease; and some cancers.

Diet reflects the variety of foods and beverages consumed over time and in settings such as worksites, schools, restaurants, and the home. Interventions to support a healthier diet can help ensure that:

- Individuals have the knowledge and skills to make healthier choices.
- Healthier options are available and affordable.

Demographic characteristics of those with a more healthful diet vary with the nutrient or food studied. However, most Americans need to improve some aspect of their diet. Social factors thought to influence diet include:

- Knowledge and attitudes
- Skills
- Social support
- Societal and cultural norms
- Food and agricultural policies
- Food assistance programs
- Economic price systems

Access to and availability of healthier foods can help people follow healthful diets. For example, better access to retail venues that sell healthier options may have a positive impact on a person's diet; these venues may be less available in low-income or rural neighborhoods. The places where people eat appear to influence their diet. For example, foods eaten away from home often have more calories and are of lower nutritional quality than foods prepared at home. Marketing also influences people's—particularly children's—food choices.
  – Healthy People 2020 (www.healthypeople.gov)

Daily Recommendation of Fruits/Vegetables
A total of 34.3% of Suffolk County Total Population adults report eating five or more servings of fruits and/or vegetables per day. This is similar to national findings. In the Target Population, 25.6% of adults report eating five or more daily servings of fruits and/or vegetables. This is lower than the Suffolk County Total Population figure. Findings are similar by subarea.

Consume Five or More Servings of Fruits/Vegetables Per Day

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 150]
             ● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.
             ● For this issue, respondents were asked to recall their food intake on the previous day.
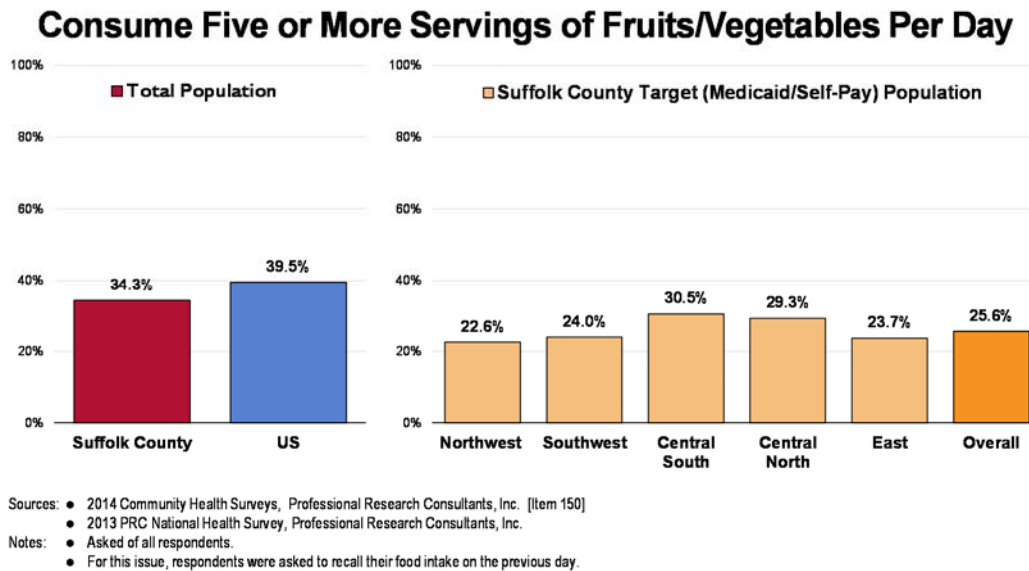
Viewed by insurance coverage, respondents who are privately insured gave the highest indication for eating 5+ fruits/vegetables per day.

Consume Five or More Servings of Fruits/Vegetables Per Day
(By Insurance Type, Suffolk County 2014)
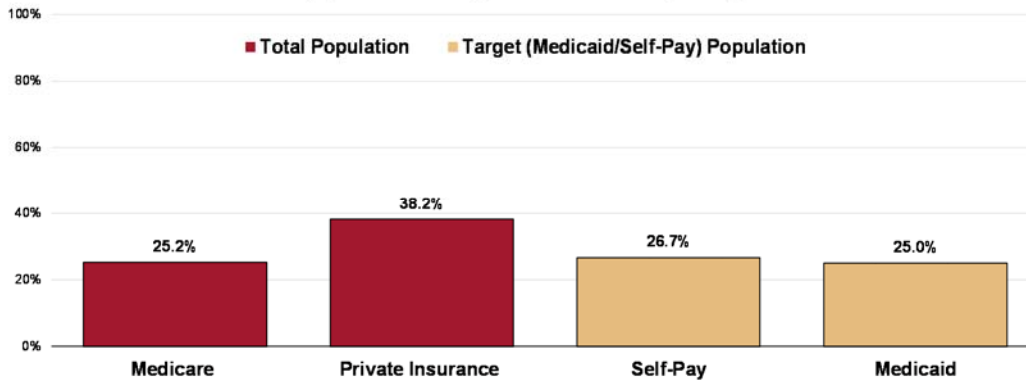
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 150]

Notes:
- Asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Access to Fresh Produce

While most report little or no difficulty, 25.4% of County adults report that it is "very" or "somewhat" difficult for them to access affordable, fresh fruits and vegetables. There is a lower prevalence (42.0%) in the Target Population.

Level of Difficulty Finding Fresh Produce at an Affordable Price
(Suffolk County, 2014)
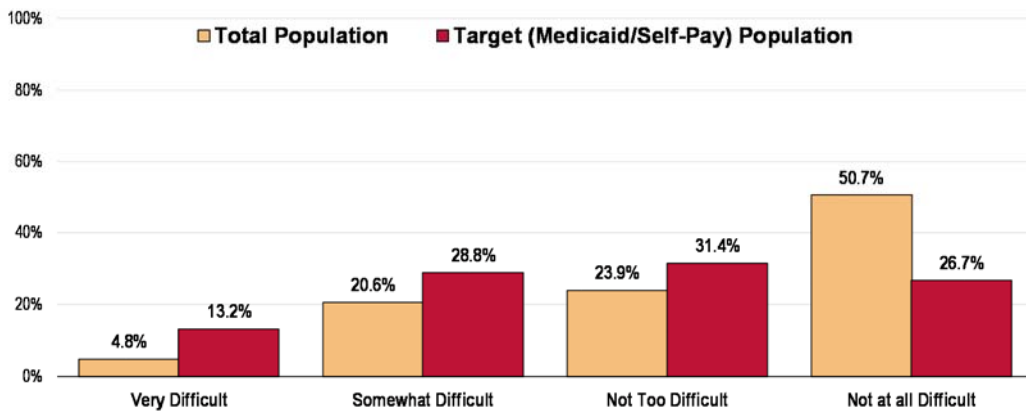
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 94]

Notes:
- Asked of all respondents.

The Suffolk County Total Population prevalence is similar to national findings. In the Target Population, findings are similar by subarea.

Find It "Very" or "Somewhat" Difficult to Buy Affordable Fresh Produce
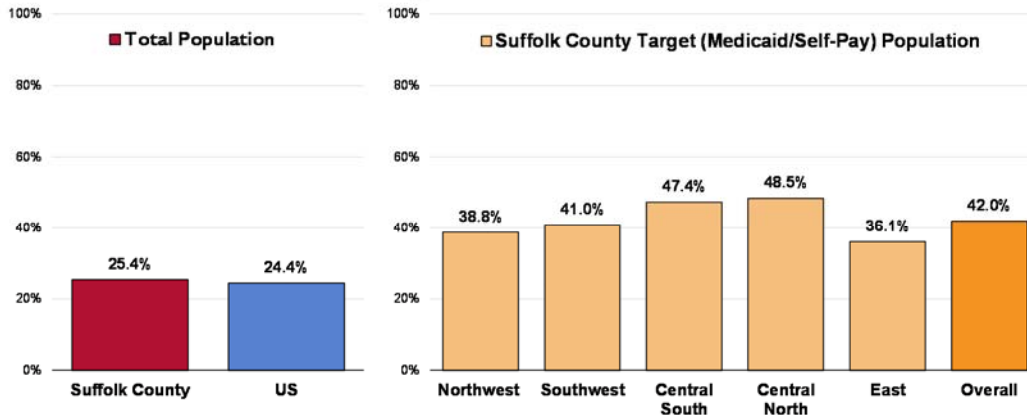
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 94]
        ● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Difficulty accessing affordable fresh produce is most pronounced in the Medicaid population, and is higher in the Medicare and uninsured populations when compared with privately insured residents.

Find It "Very" or "Somewhat" Difficult to Buy Affordable Fresh Produce
(By Insurance Type, Suffolk County 2014)
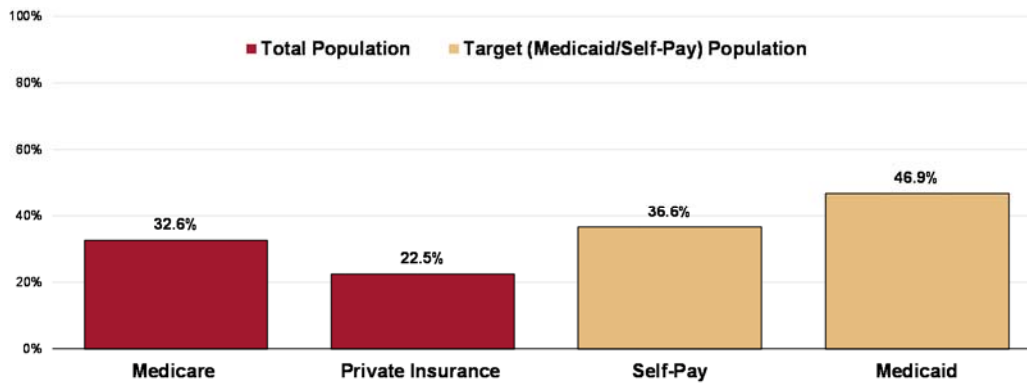
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 94]
Notes: ● Asked of all respondents.
        ● Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Food Deserts/Low Food Access
US Department of Agriculture data show that 4.6% of Suffolk County population (representing over 68,350 residents) have low food access or live in a "food desert," meaning that they do not live near a supermarket or large grocery store.
- Less favorable than statewide findings.
- More favorable than national findings.

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Population With Low Food Access
(Percent of Population in Low-Income Areas Who Are Far From a Supermarket or Large Grocery Store, 2010)

68,352 low-income individuals have low food access

	Suffolk County	NY	US
	4.6%	2.6%	6.3%
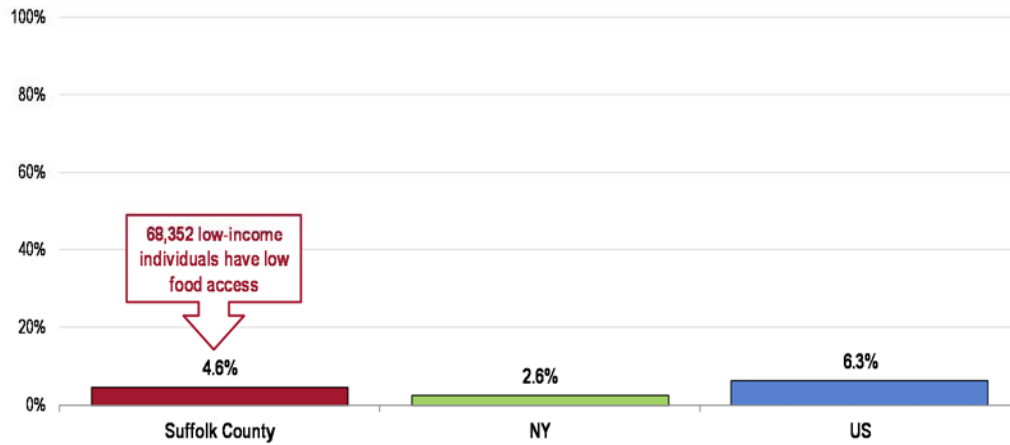
Sources:
- US Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas (FARA): 2010.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator reports the percentage of the population living in census tracts designated as food deserts. A food desert is defined as low-income areas where a significant number or share of residents is far from a supermarket, where "far" is more than 1 mile in urban areas and more than 10 miles in rural areas. This indicator is relevant because it highlights populations and geographies facing food insecurity.

Health Advice about Diet & Nutrition

A total of 43.4% of survey respondents acknowledge that a physician counseled them about diet and nutrition in the past year. This is comparable to national findings. Among overweight/obese respondents, 49.5% report receiving diet/ nutrition advice (meaning that one-half did not). In the Target Population, 44.2% of survey respondents say that a physician advised them about diet and nutrition in the past year. This is comparable to countywide findings and statistically comparable by submarket. Note: Among overweight/obese respondents in the Target Population, 48.1% report receiving diet/nutrition advice.

Have Received Advice About Diet and Nutrition in the Past Year From a Physician, Nurse, or Other Health Professional
(By Weight Classification)

Total Population

Healthy Weight: 28.7%
Overweight/Obese: 49.5%

- Suffolk County: 43.4%
- US: 39.2%

Suffolk County Target (Medicaid/Self-Pay) Population

Healthy Weight: 34.7%
Overweight/Obese: 48.1%

- Northwest: 48.5%
- Southwest: 47.0%
- Central South: 44.0%
- Central North: 44.0%
- East: 36.0%
- Overall: 44.2%
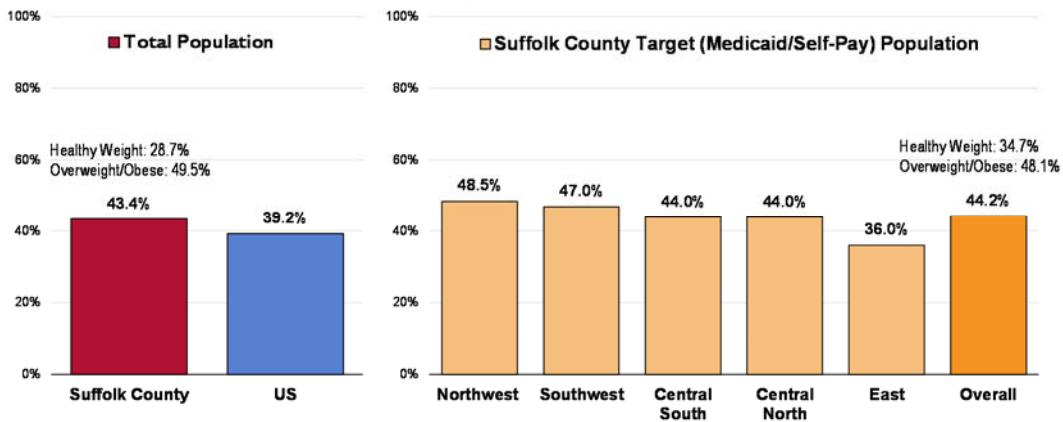
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 19]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents.

Viewed by healthcare coverage, Medicare and Medicaid recipients are more likely to have been given advice about diet and nutrition by a health professional in the past year.

Have Received Advice About Diet and Nutrition in the Past Year From a Physician, Nurse, or Other Health Professional
(By Insurance Type, Suffolk County 2014)

- Total Population
- Target (Medicaid/Self-Pay) Population

- Medicare: 55.5%
- Private Insurance: 39.0%
- Self-Pay: 33.2%
- Medicaid: 51.7%
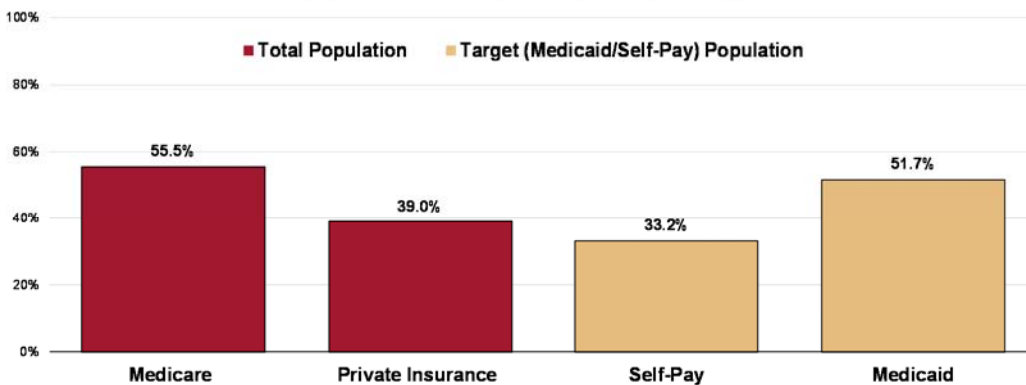
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 19]
Notes: • Asked of all respondents.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Physical Activity

Regular physical activity can improve the health and quality of life of Americans of all ages, regardless of the presence of a chronic disease or disability. Among adults and older adults, physical activity can lower the risk of: early death; coronary heart disease; stroke; high blood pressure; type 2 diabetes; breast and colon cancer; falls; and depression. Among children and adolescents, physical activity can: improve bone

health; improve cardiorespiratory and muscular fitness; decrease levels of body fat; and reduce symptoms of depression. For people who are inactive, even small increases in physical activity are associated with health benefits.

Personal, social, economic, and environmental factors all play a role in physical activity levels among youth, adults, and older adults. Understanding the barriers to and facilitators of physical activity is important to ensure the effectiveness of interventions and other actions to improve levels of physical activity. Factors **positively** associated with adult physical activity include: postsecondary education; higher income; enjoyment of exercise; expectation of benefits; belief in ability to exercise (self-efficacy); history of activity in adulthood; social support from peers, family, or spouse; access to and satisfaction with facilities; enjoyable scenery; and safe neighborhoods. Factors **negatively** associated with adult physical activity include: advancing age; low income; lack of time; low motivation; rural residency; perception of great effort needed for exercise; overweight or obesity; perception of poor health; and being disabled. Older adults may have additional factors that keep them from being physically active, including lack of social support, lack of transportation to facilities, fear of injury, and cost of programs.
  – Healthy People 2020 (www.healthypeople.gov)

Leisure-Time Physical Activity
A total of 22.2% of Suffolk County Total Population adults report no leisure-time physical activity in the past month. This is similar to statewide and national findings. It satisfies the Healthy People 2020 target (32.6% or lower). In the Target Population, 31.7% of adults had no leisure-time physical activity last month. This is less favorable than the Suffolk County Total Population prevalence. Findings are similar findings by subarea.

No Leisure-Time Physical Activity in the Past Month
Healthy People 2020 Target = 36.2% or Lower
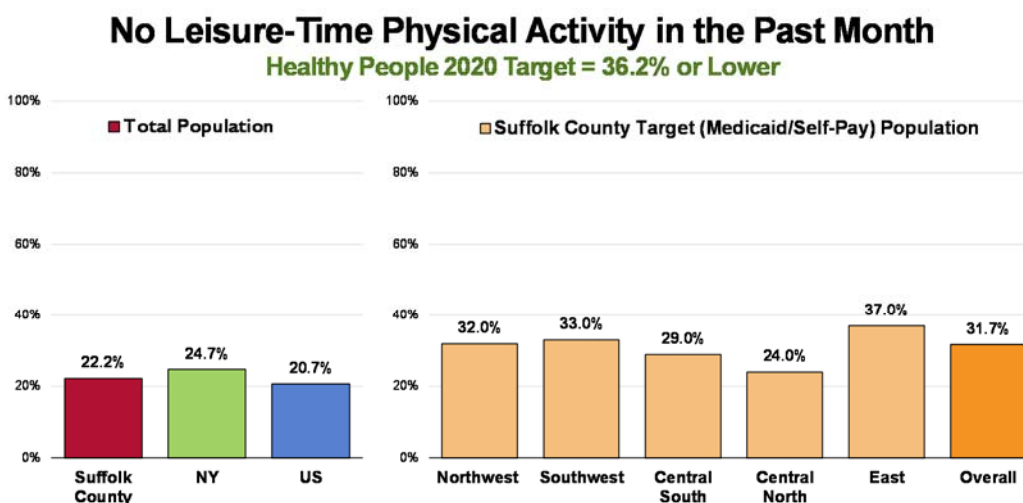
Sources:
● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 95]
● Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
● US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective PA-1]
Notes:
● Asked of all respondents.

Lack of leisure-time physical activity is notably lower (more favorable) in the privately insured population segment.

No Leisure-Time Physical Activity in the Past Month
(By Insurance Type, Suffolk County 2014)
Healthy People 2020 Target = 36.2% or Lower

■ Total Population ■ Target (Medicaid/Self-Pay) Population

Insurance Type	Percentage
Medicare	32.0%
Private Insurance	17.9%
Self-Pay	29.1%
Medicaid	32.2%
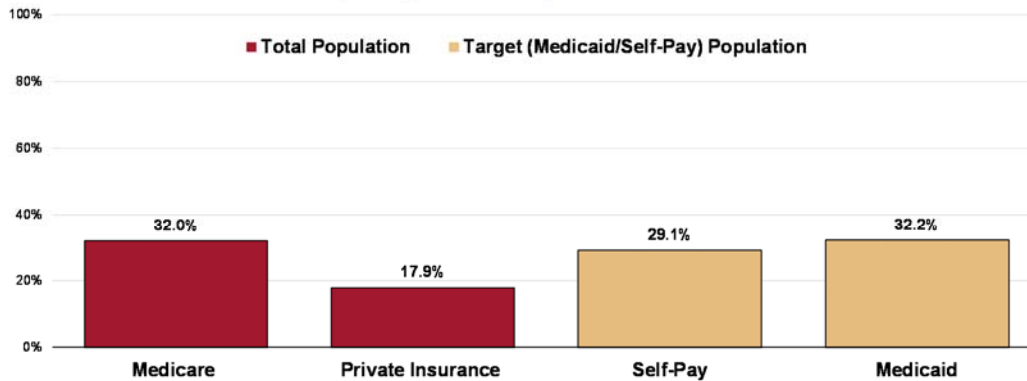
Sources:
• 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 95]
• US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective PA-1]

Notes:
• Asked of all respondents.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

Activity Levels

Adults (age 18–64) should do 2 hours and 30 minutes a week of moderate-intensity, or 1 hour and 15 minutes (75 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic physical activity. Aerobic activity should be performed in episodes of at least 10 minutes, preferably spread throughout the week.

Additional health benefits are provided by increasing to 5 hours (300 minutes) a week of moderate-intensity aerobic physical activity, or 2 hours and 30 minutes a week of vigorous-intensity physical activity, or an equivalent combination of both. Older adults (age 65 and older) should follow the adult guidelines. If this is not possible due to limiting chronic conditions, older adults should be as physically active as their abilities allow. They should avoid inactivity. Older adults should do exercises that maintain or improve balance if they are at risk of falling. For all individuals, some activity is better than none. Physical activity is safe for almost everyone, and the health benefits of physical activity far outweigh the risks.

– 2008 Physical Activity Guidelines for Americans, U.S. Department of Health and Human Services. www.health.gov/PAGuidelines

Recommended Levels of Physical Activity

A total of 44.6% of Suffolk County Total Population adults participate in regular, sustained moderate or vigorous physical activity (meeting physical activity recommendations). This is less favorable than national findings. In the Target Population, 35.9% of adults meet physical activity recommendations. This is less favorable than countywide findings and statistically similar findings by subarea.

Meets Physical Activity Recommendations
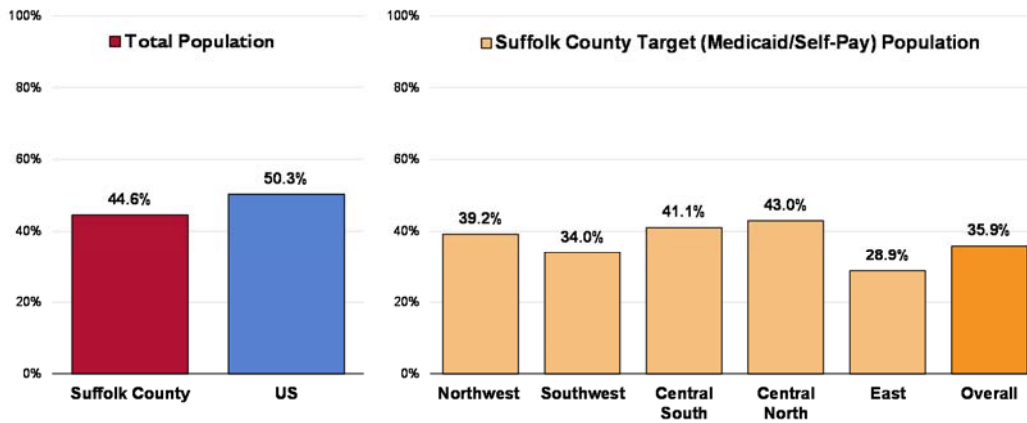
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 151]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.
● In this case the term "meets physical activity recommendations" refers to participation in moderate physical activity (exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate) at least 5 times a week for 30 minutes at a time, and/or vigorous physical activity (activities that cause heavy sweating or large increases in breathing or heart rate) at least 3 times a week for 20 minutes at a time.

Viewed by insurance, residents with private healthcare coverage are much more likely to meet physical activity requirements.

Meets Physical Activity Recommendations
(By Insurance Type, Suffolk County 2014)
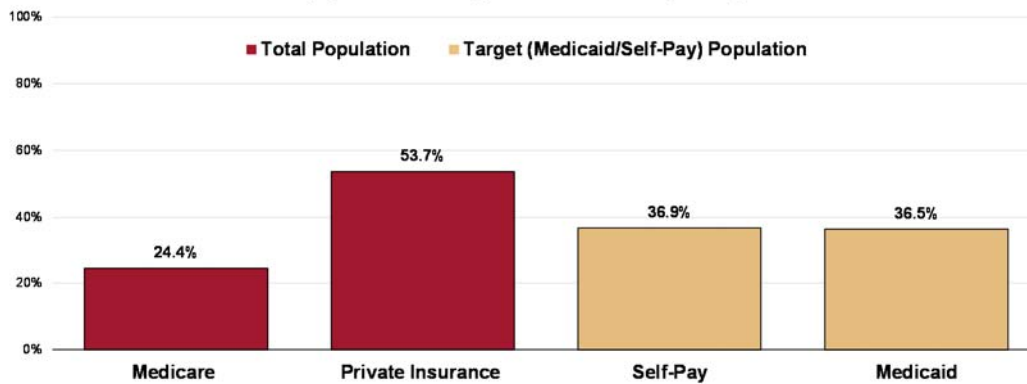
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 151]
Notes: ● Asked of all respondents.
● Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
● In this case the term "meets physical activity recommendations" refers to participation in moderate physical activity (exercise that produces only light sweating or a slight to moderate increase in breathing or heart rate) at least 5 times a week for 30 minutes at a time, and/or vigorous physical activity (activities that cause heavy sweating or large increases in breathing or heart rate) at least 3 times a week for 20 minutes at a time.

Access to Physical Activity - Park Access
A total of 26.7% of Suffolk County adults live within ½ mile of a park. This is much lower than the proportion across New York and the nation.

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Population With Park Access
(Percent of Population Living Within ½ Mile of a Park, 2013)

	Suffolk County	NY	US
Value	26.7%	48.2%	38.0%
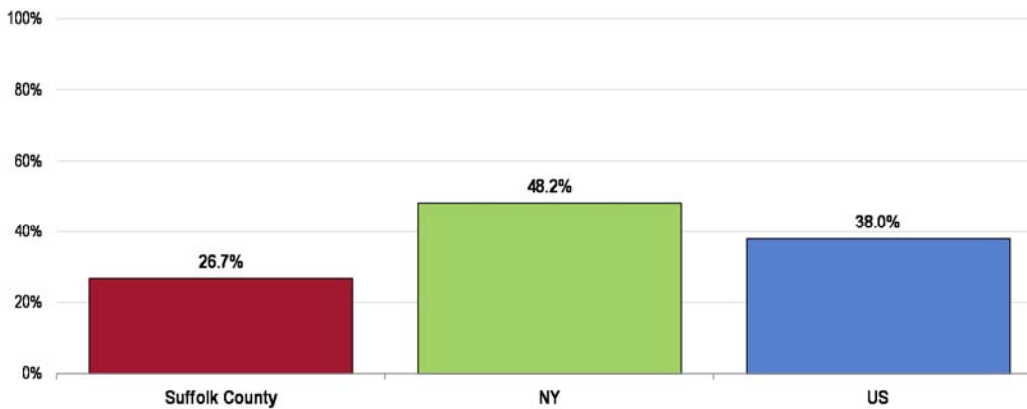
Sources:
- ESRI Map Gallery: 2013 and OpenStreetMap (OSM): 2013. Additional analysis by CARES.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because access to outdoor recreation encourages physical activity and other healthy behaviors.

Access to Recreation & Fitness Facilities

In 2012, there were 14.3 recreation/fitness facilities for every 100,000 population in Suffolk County. This

Population With Recreation & Fitness Facility Access
(Number of Recreation & Fitness Facilities per 100,000 Population, 2012)

	Suffolk County	NY	US
Value	14.3	11.1	9.4
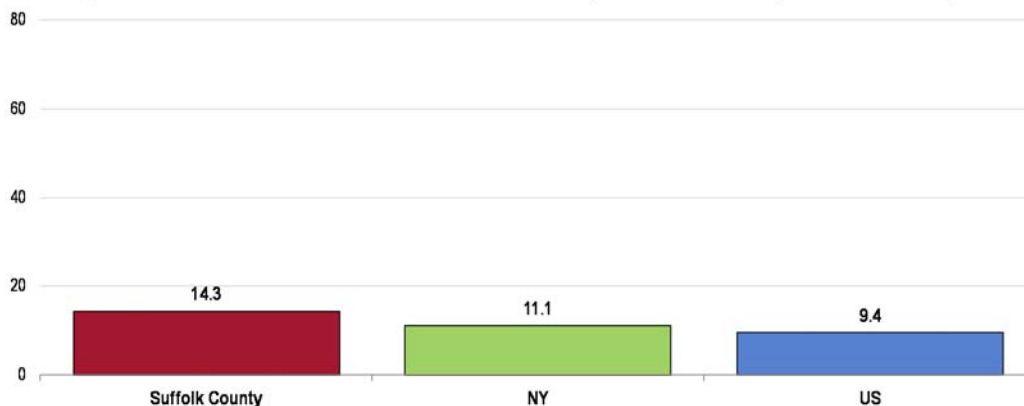
Sources:
- US Census Bureau, County Business Patterns: 2011. Additional data analysis by CARES.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- Recreation and fitness facilities are defined by North American Industry Classification System (NAICS) Code 713940 , which include *Establishments engaged in operating facilities which offer "exercise and other active physical fitness conditioning or recreational sports activities"*. Examples include athletic clubs, gymnasiums, dance centers, tennis clubs, and swimming pools. This indicator is relevant because access to recreation and fitness facilities encourages physical activity and other healthy behaviors.

is above what is found statewide and nationally.

Health Advice about Physical Activity & Exercise

A total of 46.4% of Suffolk County Total Population adults report that their physician has asked about or given advice to them about physical activity in the past year. This is comparable to the national average. (Note: 51.9% of overweight/obese Suffolk County Total Population respondents say that they have talked with their doctor about physical activity/exercise in the past year.) In the Target Population, 43.7% of adults report that their physician has asked about or given advice to them about physical activity in the past year. This is comparable to the County average. Findings are unfavorably low in the East. In the

Target Population, 51.9% of overweight/obese adults received exercise advice from a health professional last year.

Have Received Advice About Exercise in the Past Year From a Physician, Nurse, or Other Health Professional
(By Weight Classification)
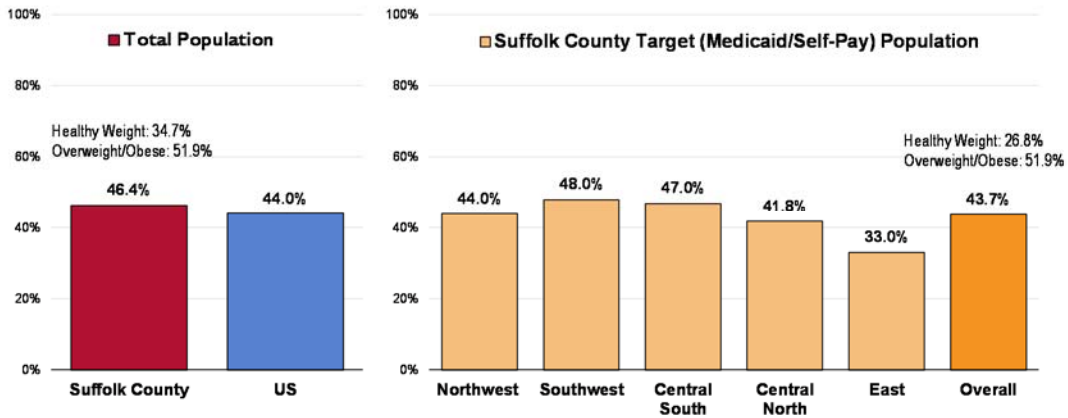
Sources:
• 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 20]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
• Asked of all respondents.

Viewed by healthcare coverage, recipients of Medicare and Medicaid are most likely to have received advice on exercise in the past year; in contrast, adults without any coverage were least likely to have received such advice from a health professional.

Have Received Advice About Exercise in the Past Year From a Physician, Nurse, or Other Health Professional
(By Insurance Type, Suffolk County 2014)
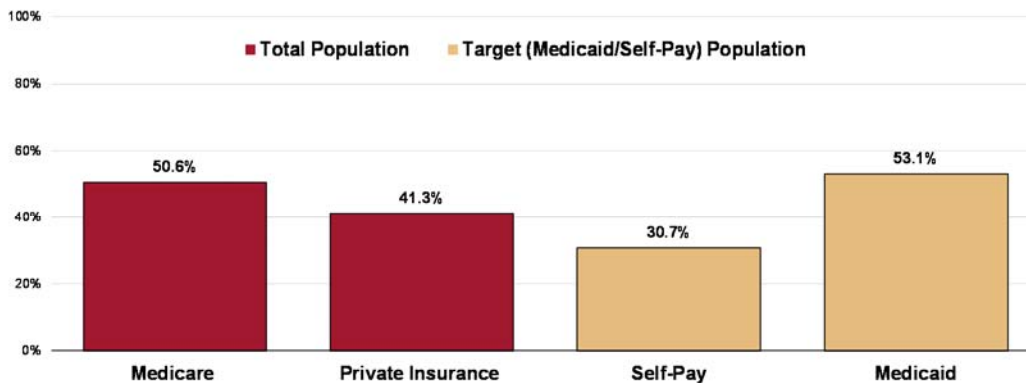
Sources:
• 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 20]

Notes:
• Asked of all respondents.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

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Children's Physical Activity
Among Suffolk County Total Population children age 2 to 17, 56.9% are reported to have had 60 minutes of physical activity on <u>each</u> of the seven days preceding the interview
(1+ hours per day). This is similar to that found nationally. Findings are similar in the Target Population (58.3%).

Child Is Physically Active for One or More Hours per Day
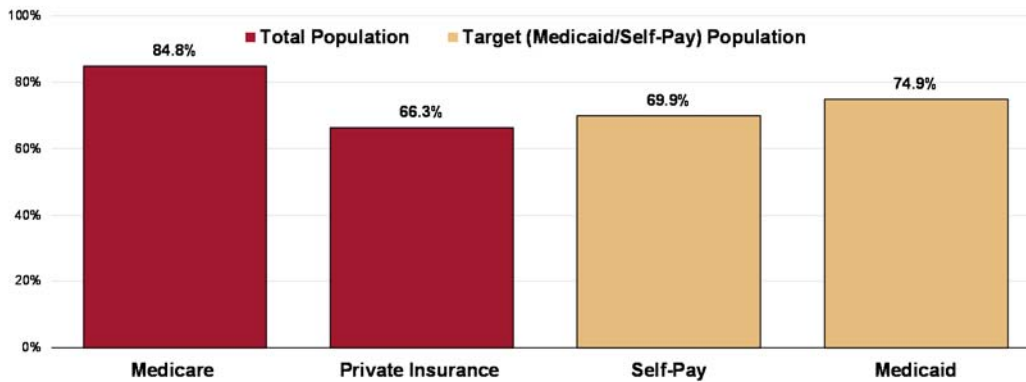### (Among Children Age 2-17)
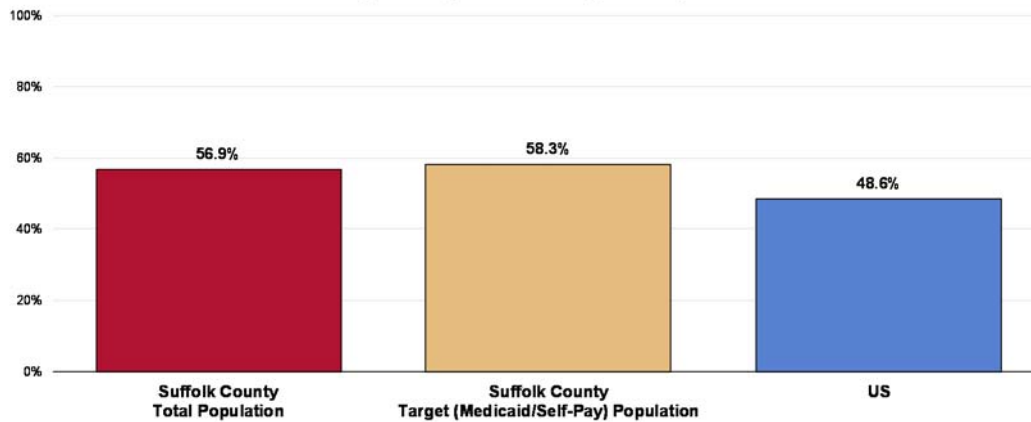
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 120]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents with children age 2-17 at home.
• Includes children reported to have one or more hours of physical activity on each of the seven days preceding the survey.

Children of parents with no healthcare insurance coverage are more likely to be physically active for at least one hour per day.

Child is Physically Active for One or More Hours per Day
(By Insurance Type, Suffolk County Parents of Children Age 2-17; 2014)
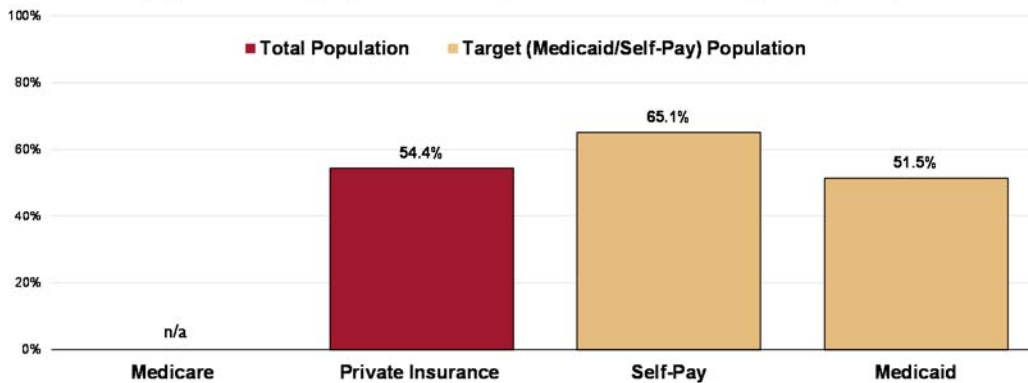
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 120]
Notes: • Asked of all respondents with children age 2-17 at home.
• Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
• Includes children reported to have one or more hours of physical activity on each of the seven days preceding the survey.

Weight Status
Because weight is influenced by energy (calories) consumed and expended, interventions to improve weight can support changes in diet or physical activity. They can help change individuals' knowledge and

skills, reduce exposure to foods low in nutritional value and high in calories, or increase opportunities for physical activity. Interventions can help prevent unhealthy weight gain or facilitate weight loss among obese people. They can be delivered in multiple settings, including healthcare settings, worksites, or schools. The social and physical factors affecting diet and physical activity (see Physical Activity topic area) may also have an impact on weight. Obesity is a problem throughout the population. However, among adults, the prevalence is highest for middle-aged people and for non-Hispanic Black and Mexican American women. Among children and adolescents, the prevalence of obesity is highest among older and Mexican American children and non-Hispanic Black girls. The association of income with obesity varies by age, gender, and race/ethnicity.

  – Healthy People 2020 (www.healthypeople.gov)

Body Mass Index (BMI), which describes relative weight for height, is significantly correlated with total body fat content. The BMI should be used to assess overweight and obesity and to monitor changes in body weight. In addition, measurements of body weight alone can be used to determine efficacy of weight loss therapy. BMI is calculated as weight (kg)/height squared (m^2). To estimate BMI using pounds and inches, use: [weight (pounds)/height squared (inches^2)] x 703.

In this report, overweight is defined as a BMI of 25.0 to 29.9 kg/m^2 and obesity as a BMI ≥30 kg/m^2. The rationale behind these definitions is based on epidemiological data that show increases in mortality with BMIs above 25 kg/m^2. The increase in mortality, however, tends to be modest until a BMI of 30 kg/m^2 is reached. For persons with a BMI ≥30 kg/m^2, mortality rates from all causes, and especially from cardiovascular disease, are generally increased by 50 to 100 percent above that of persons with BMIs in the range of 20 to 25 kg/m^2.

  – Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. National Institutes of Health. National Heart, Lung, and Blood Institute in Cooperation With The National Institute of diabetes and Digestive and Kidney Diseases. September 1998.

Classification of Overweight and Obesity by BMI	BMI (kg/m^2)
Underweight	<18.5
Normal	18.5 – 24.9
Overweight	25.0 – 29.9
Obese	≥30.0

Source: Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. National Institutes of Health. National Heart, Lung, and Blood Institute in Cooperation With The National Institute of diabetes and Digestive and Kidney Diseases. September 1998.

Adult Weight Status
Based on self-reported heights and weights, 31.1% of Suffolk County Total Population adults are at a healthy weight. This is below the state prevalence and similar to the national prevalence. It is similar to

the Healthy People 2020 target (33.9% or higher). In the Target Population, 24.9% are at a healthy weight. This is below the countywide prevalence. Findings are comparable by subarea.
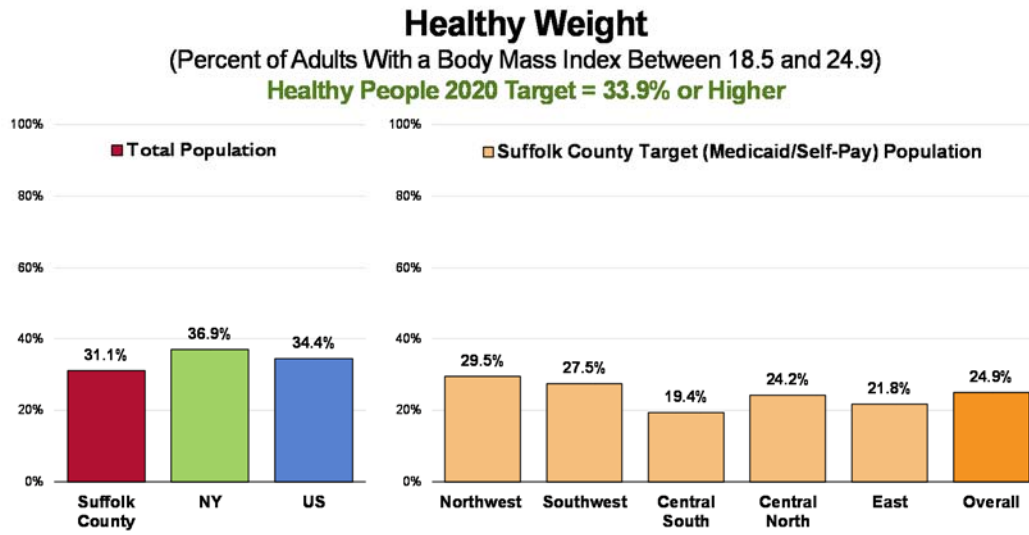
Healthy Weight
(Percent of Adults With a Body Mass Index Between 18.5 and 24.9)
Healthy People 2020 Target = 33.9% or Higher

■ Total Population   □ Suffolk County Target (Medicaid/Self-Pay) Population

	Suffolk County	NY	US		Northwest	Southwest	Central South	Central North	East	Overall
	31.1%	36.9%	34.4%		29.5%	27.5%	19.4%	24.2%	21.8%	24.9%

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 158]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-8]

Notes:
- Based on reported heights and weights, asked of all respondents.
- The definition of healthy weight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), between 18.5 and 24.9.

Adults with private healthcare coverage are more likely to be at a healthy weight (the lowest prevalence was reported among Medicare recipients).

Healthy Weight
(Percent of Adults With a BMI Between 18.5 and 24.9; By Insurance Type, Suffolk County 2014)
Healthy People 2020 Target = 33.9% or Higher

■ Total Population   ■ Target (Medicaid/Self-Pay) Population

	Medicare	Private Insurance	Self-Pay	Medicaid
	15.1%	33.8%	26.2%	24.6%
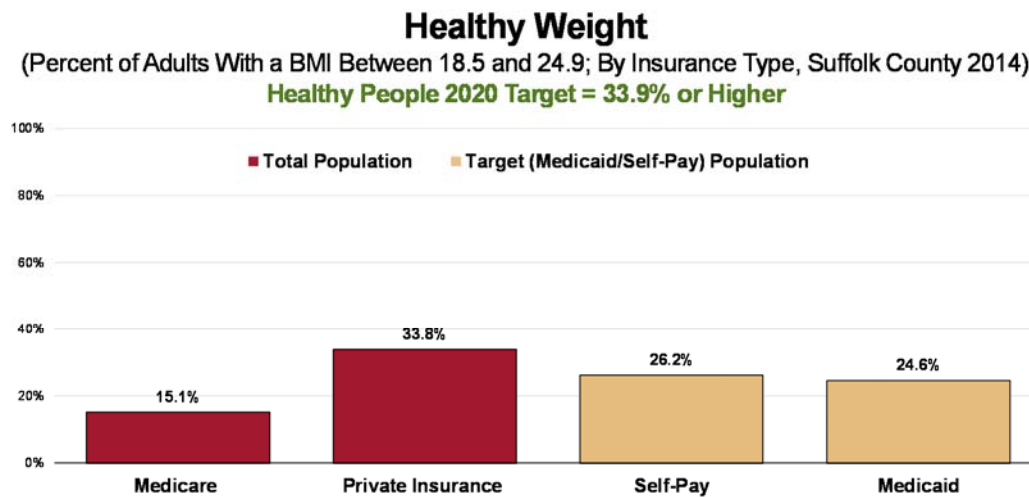
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 158]
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-8]

Notes:
- Based on reported heights and weights, asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
- The definition of healthy weight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), between 18.5 and 24.9.

Adult Weight Status

Nearly 7 in 10 Suffolk County Total Population adults (68.9%) are overweight. This is higher than the New York and national prevalence. In the Target Population, 73.3% of adults are overweight. This is comparable to the Suffolk County Total Population prevalence and similar by subarea.

Prevalence of Total Overweight
(Percent of Adults With a Body Mass Index of 25.0 or Higher)

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 158]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.

Notes:
- Based on reported heights and weights, asked of all respondents.
- The definition of overweight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 25.0, regardless of gender. The definition for obesity is a BMI greater than or equal to 30.0.

Viewed by healthcare coverage, the prevalence of overweight is highest among Medicare recipients.

Prevalence of Total Overweight
(Percent of Adults With a BMI of 25.0 or Higher; By Insurance Type, Suffolk County 2014)

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 158]

Notes:
- Based on reported heights and weights, asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
- The definition of overweight is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 25.0, regardless of gender. The definition for obesity is a BMI greater than or equal to 30.0.

Obesity

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In the Suffolk County Total Population, 28.7% of adults are obese. This is less favorable than New York findings, and similar to US findings. It is similar to the Healthy People 2020 target (30.6% or lower). In the Target Population, 35.4% of adults are obese. This is less favorable than the Suffolk County Total Population prevalence and similar to findings by subarea.

Prevalence of Obesity
(Percent of Adults With a Body Mass Index of 30.0 or Higher)
Healthy People 2020 Target = 30.5% or Lower

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 158]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.
- US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-9]
- Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia. United States Department of Health and Human Services, Centers for Disease Control and Prevention (CDC): 2012 New York data.

Notes:
- Based on reported heights and weights, asked of all respondents.
- The definition of obesity is having a body mass index (BMI), a ratio of weight to height (kilograms divided by meters squared), greater than or equal to 30.0, regardless of gender.

By insurance type, obesity is highest among Medicaid recipients.

Prevalence of Obesity
(Percent of Adults With a BMI of 30.0 or Higher; By Insurance Type, Suffolk County 2014)

Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 158]

Notes:
- Based on reported heights and weights, asked of all respondents.
- Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.
- The definition for obesity is a BMI greater than or equal to 30.0.

Weight Control
Individuals who are at a healthy weight are less likely to:

- Develop chronic disease risk factors, such as high blood pressure and dyslipidemia.
- Develop chronic diseases, such as type 2 diabetes, heart disease, osteoarthritis, and some cancers.
- Experience complications during pregnancy.
- Die at an earlier age.

All Americans should avoid unhealthy weight gain, and those whose weight is too high may also need to lose weight.

– Healthy People 2020 (www.healthypeople.gov)

A total of 39.9% of Suffolk County Total Population adults who are overweight say that they are both modifying their diet and increasing their physical activity to try to lose weight. This is similar to national findings. In the Target Population, 41.3% of adults who are overweight say that they are both modifying their diet and increasing their physical activity to try to lose weight. This is similar to the countywide response and similar by subarea.

Trying to Lose Weight by Both Modifying Diet and Increasing Physical Activity
(Among Overweight or Obese Respondents)

■ Total Population

□ Suffolk County Target (Medicaid/Self-Pay) Population

|	Suffolk County	US	Northwest	Southwest	Central South	Central North	East	Overall
	39.9%	39.5%	42.6%	41.5%	38.9%	36.6%	46.2%	41.3%
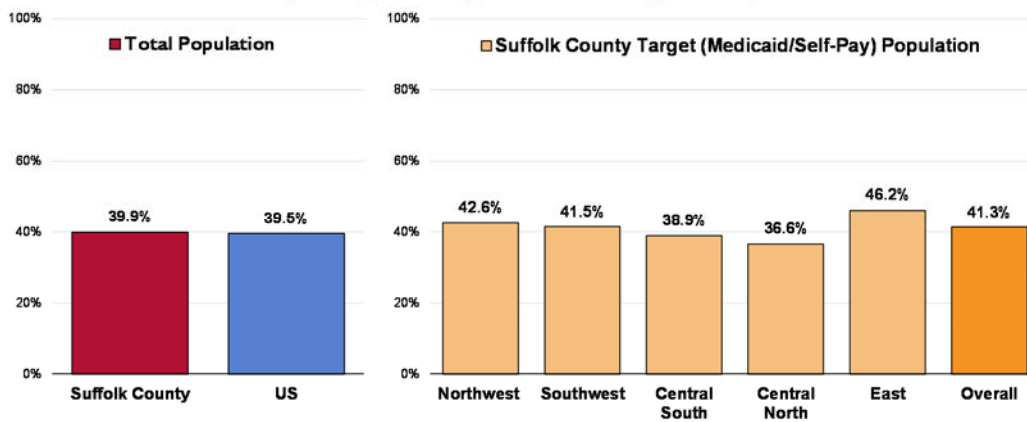
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 159]
● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Reflects respondents who are overweight or obese based on reported heights and weights.

Responses among overweight/obese adults do not vary significantly by insurance coverage.

Trying to Lose Weight by Both
Modifying Diet and Increasing Physical Activity
(By Insurance Type, Suffolk County Overweight/Obese Adults; 2014)

Childhood Overweight & Obesity
In children and teens, body mass index (BMI) is used to assess weight status – underweight, healthy weight, overweight, or obese. After BMI is calculated for children and teens, the BMI number is plotted on the CDC BMI-for-age growth charts (for either girls or boys) to obtain a percentile ranking. Percentiles are the most commonly used indicator to assess the size and growth patterns of individual children in the United States. The percentile indicates the relative position of the child's BMI number among children of the same sex and age. BMI-for-age weight status categories and the corresponding percentiles are shown below:
- Underweight   <5th percentile
- Healthy Weight   ≥5th and <85th percentile
- Overweight   ≥85th and <95th percentile
- Obese   ≥95th percentile

   – Centers for Disease Control and Prevention.

Based on the heights/weights reported by surveyed parents, 17.1% of Suffolk County Total Population children age 5 to 17 are overweight or obese (≥85th percentile). This is well below that found nationally. It is much higher in the Target Population (47.9%).

Child Total Overweight Prevalence
(Percent of Children Age 5-17 Who Are Overweight/Obese; Body Mass Index in the 85th Percentile or Higher)
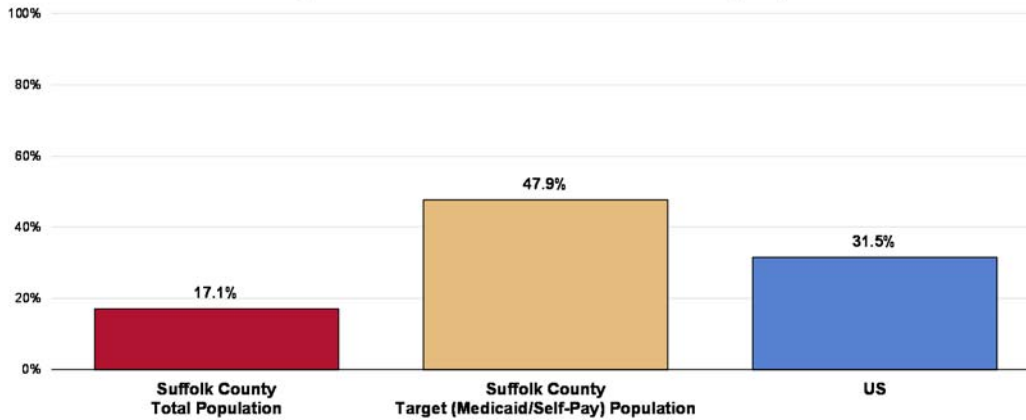
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 162]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: • Asked of all respondents with children age 5-17 at home.
• Overweight among children is determined by children's Body Mass Index status at or above the 85th percentile of US growth charts by gender and age.

Further, 5.2% of Suffolk County Total Population children age 5 to 17 are obese (≥95th percentile). This is well below the national percentage and it satisfies the Healthy People 2020 target (14.6% or lower for children age 2-19). It is much higher in the Target Population (29.4%).

Child Obesity Prevalence
(Percent of Children Age 5-17 Who Are Obese; BMI in the 95th Percentile or Higher)
Healthy People 2020 Target = 14.5% or Lower
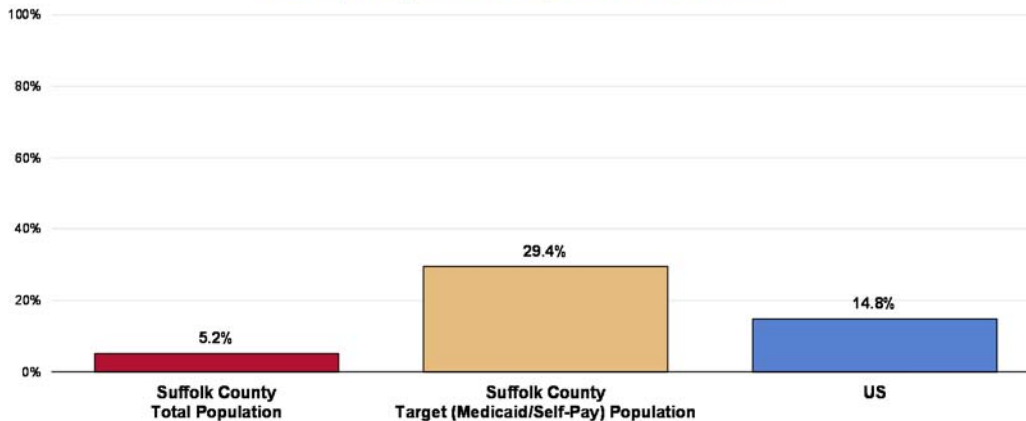
Sources: • 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 162]
• 2013 PRC National Health Survey, Professional Research Consultants, Inc.
• US Department of Health and Human Services. Healthy People 2020. December 2010. http://www.healthypeople.gov [Objective NWS-10.4]
Notes: • Asked of all respondents with children age 5-17 at home.
• Obesity among children is determined by children's Body Mass Index status equal to or above the 95th percentile of US growth charts by gender and age.

Key Informant Input

Perceptions of Nutrition, Physical Activity, and Weight as a Problem in the Community for the Target Population
(Key Informants, 2014)

■ Major Problem   ▢ Moderate Problem   ■ Minor Problem   ▢ No Problem At All

| 58.0% | 31.8% | 8.0% | 2.3% |

Sources: ● PRC Online Key Informant Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Comments included:

Mainly an economic issue. Second, family of origin norms. There is little, if any, ongoing support for clients to make these changes in their daily lives. - Other Health Professional

Individuals with low income and or mental illness often do not have access to appropriate nutrition or exercise facilities or health education. Likewise, many psychiatric medications cause weight gain. - Other Health Professional

Most clients are on limited incomes and unable to purchase healthy, fresh foods. Some do not have skills to cook, to shop and budget and most do not have transportation to go to a supermarket, so they'd rather go to local fast food places and buy from the dollar menu. Many clients smoke and spend what little money they do have on cigarettes. Many of the medications client take cause weight gain and a host of other problems over the long term. This coupled with sometimes poor or inconsistent medical care causes more problems. With some clients, the medications sometimes have a sedating effect making physical activity difficult. Sometimes, the illness itself causes a lack of motivation. – Other Health Professional

Lack of education about what good nutrition is, how to shop for food with an eye on nutrition and cook using good nutrition. Transportation to markets where a variety of nutritious food is available at reasonable cost. - Other Health Professional

Nutrition for elders. No special dietary limitations are a part of the Meals on Wheels for seniors. Lack of and reimbursement for diabetic educators and registered dieticians in the community setting. Lack of insurance reimbursement for supportive nutritional requirements for healing. Lack of access to hospital-based nutritional consults and identified needs and interventions once patient transitions from hospital to home. Lack of knowledge and collaboration of community-based prevention, wellness programs. - Other Health Professional

Health Service Access and Perceptions of Quality/Adequacy - Findings from the PRC Population and Key Informant Surveys

Medicaid recipients and those without health insurance experience greater barriers to care than those with private health insurance. A total of 43.8% of the Suffolk County Total Population adults report some type of difficulty or delay in obtaining healthcare services in the past year. This is comparable to national findings. In the Target Population, 2 in 3 adults (66.6%) report some type of difficulty or delay in obtaining healthcare services in the past year. This is much less favorable than countywide findings and is

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highest in the Southwest submarket. Overall, the greatest access barriers in the Target Population are related to the cost of prescription drugs and doctor visits, and in getting an appointment.

Experienced Difficulties or Delays of Some Kind in Receiving Needed Healthcare in the Past Year
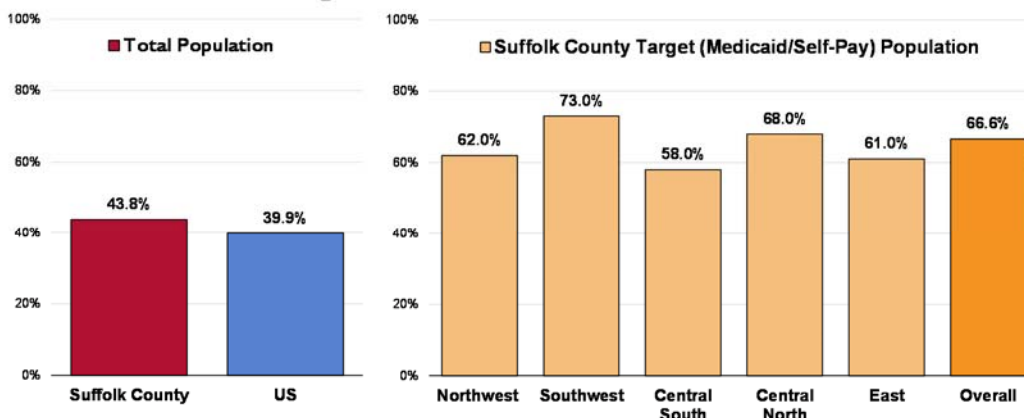
Sources:
- 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 175]
- 2013 PRC National Health Survey, Professional Research Consultants, Inc.

Notes:
- Asked of all respondents.
- Represents the percentage of respondents experiencing one or more barriers to accessing healthcare in the past 12 months.

PRC Community Health Needs Assessment
Suffolk County, NY

Barriers to Access
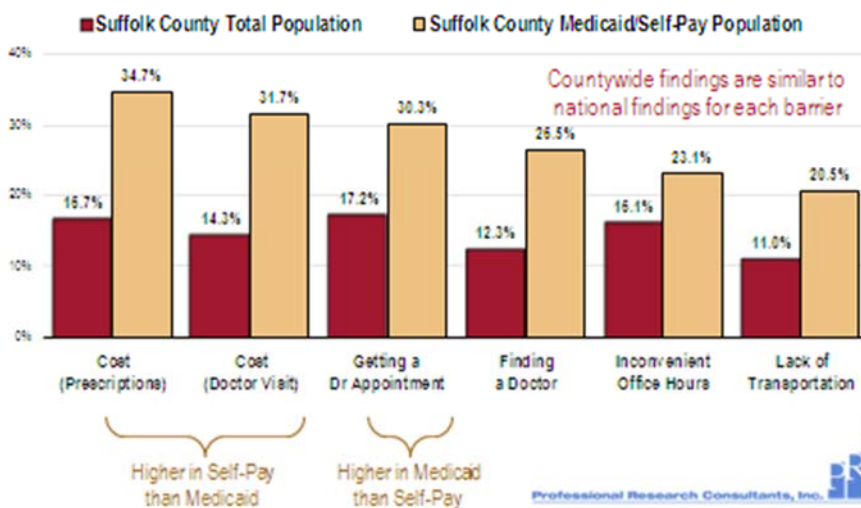
The following comments from Key Informants illustrate the problem:

> *Overall, there are fewer providers who accept Medicaid. Patients often have to wait months for an appointment, especially if they are new patients. This is especially true for mental healthcare services, and even an initial psychiatric evaluation. The result is that people either do not get medical care, use Emergency Rooms as if they were walk-in clinics, or use Emergency Rooms and*

hospitals once problems become severe, when they could have been treated before the issues became extreme, and sometimes too severe to treat. - Social Service Provider

I am the only physician in this area that accepts straight Medicaid. Dental care and mental health for the patients of lower socioeconomic status is very difficult to access. Lack of public transportation negatively impacts the already limited accessibility for these patients. Physician

Access to primary care is limited. Overall, In Suffolk County in 2011, there are 1,273 primary care physicians, translating to a rate of 84.9 primary care physicians per 100,000 residents. This is well below the primary care physician-to-population ratio found statewide, and comparable to national statistics. This rate has remained largely stable over the past ten years.

Access to Primary Care
(Number of Primary Care Physicians per 100,000 Population, 2011)

Sources:
- US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File: 2011.
- Retrieved August 2014 from Community Commons at http://www.chna.org.

Notes:
- This indicator is relevant because a shortage of health professionals contributes to access and health status issues.

Only 62.8% of the Suffolk County Medicaid/Self-pay population have a specific source of care, while many (29.1%) report having multiple ED visits in the last year. Compared to those with private insurance, Medicaid and uninsured populations are far less likely to receive regular dental or vision care.

Key Information Input
Key Informants perceived behavioral healthcare as the most difficult to access, followed by substance abuse treatment and primary care.

Type of Care Most Difficult to Access (Among Those Characterizing Access to Healthcare as a "Major Problem")				
Type of Care	Most Difficult to Access	Second-Most Difficult to Access	Third-Most Difficult to Access	Total Mentions
Behavioral Health	44.4%	13.5%	8.3%	28

Substance Abuse Treatment	13.3%	24.3%	13.9%	20
Primary Care	11.1%	8.1%	19.4%	15
Specialty Care	11.1%	18.9%	8.3%	15
Dental Care	8.9%	16.2%	11.1%	14
Chronic Disease	0.0%	10.8%	16.7%	10
Elder Care	4.4%	2.7%	5.6%	5
Urgent Care	0.0%	2.7%	11.1%	5
Pain Management	4.4%	2.7%	2.8%	4
Palliative Care	2.2%	0.0%	0.0%	1
Safe Housing	0.0%	0.0%	2.8%	1

In the high need areas (Brentwood/Bay Shore/Central Islip/Huntington Station; Riverhead/Hampton Bays; and Patchogue), the clinics run by Suffolk County or Hudson River Healthcare provide some degree of access, but there is still high ED usage and barriers to primary care access. For example, in Riverhead, most use the Peconic Bay Medical Center ED as a PCP clinic. This is partly because the Riverhead County clinic does not accept walk-in appointments and has limited hours. In Hampton Bays, there are no primary care clinics and few PCPs that are willing to see Medicaid patients. Efforts are being made to increase access. In Brentwood/Huntington Station, for example, the close linkage between Huntington Hospital and the County-run Brentwood Family Health Center allows for easier access to PCP follow-up appointments. There is also a local EMS-run pilot that uses paramedics to provide home visits.

Specialty care is also a problem is these high need areas. Interviews with providers revealed that there are long waiting times for specialty care and few providers willing to accept Medicaid. Specialty services that are particularly difficult to access include psychiatry, orthopedics, endocrinology, oncology, cardiology, nephrology, and urology.

Perceptions of Healthcare Quality/Adequacy
Over one-half of Suffolk County Total Population adults (57.3%) rate the overall healthcare services available in their community as "excellent" or "very good." Another 31.9% gave "good" ratings. In the Target Population, only 41.7% of adults rate the overall healthcare services available in the community as "excellent" or "very good." Another 34.6% gave "good" ratings.

Rating of Overall Healthcare
Services Available in the Community
(Suffolk County, 2014)
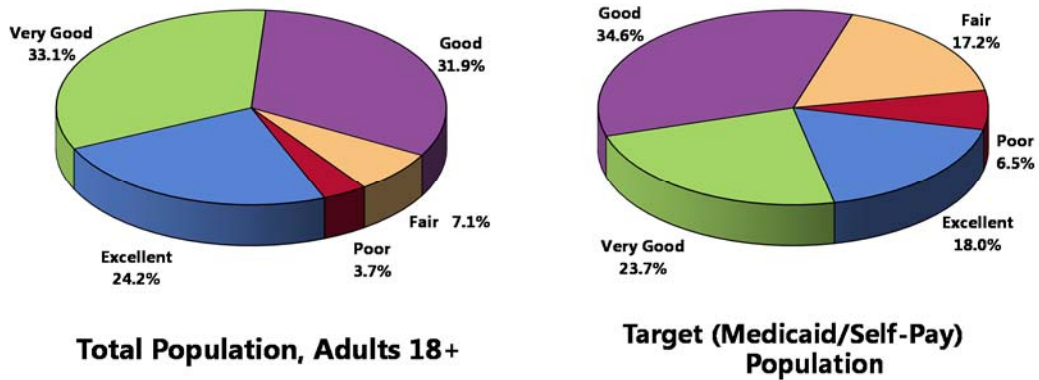
Very Good
33.1%

Good
31.9%

Fair 7.1%

Poor
3.7%

Excellent
24.2%

Total Population, Adults 18+

Good
34.6%

Fair
17.2%

Poor
6.5%

Excellent
18.0%

Very Good
23.7%

**Target (Medicaid/Self-Pay)
Population**

Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 7]
Notes: ● Asked of all respondents.

However, 10.8% of County Total Population residents characterize local healthcare services as "fair" or "poor." This is more favorable than reported nationally. In the Target Population, 23.7% of adults rate local healthcare services as "fair" or "poor." This is more than twice the countywide prevalence. There are no significant differences by subarea.

Perceive Local Healthcare Services as "Fair/Poor"

■ Total Population

□ Suffolk County Target (Medicaid/Self-Pay) Population

10.8%
Suffolk County

16.5%
US

18.4%
Northwest

25.2%
Southwest

21.2%
Central South

25.5%
Central North

23.7%
East

23.7%
Overall
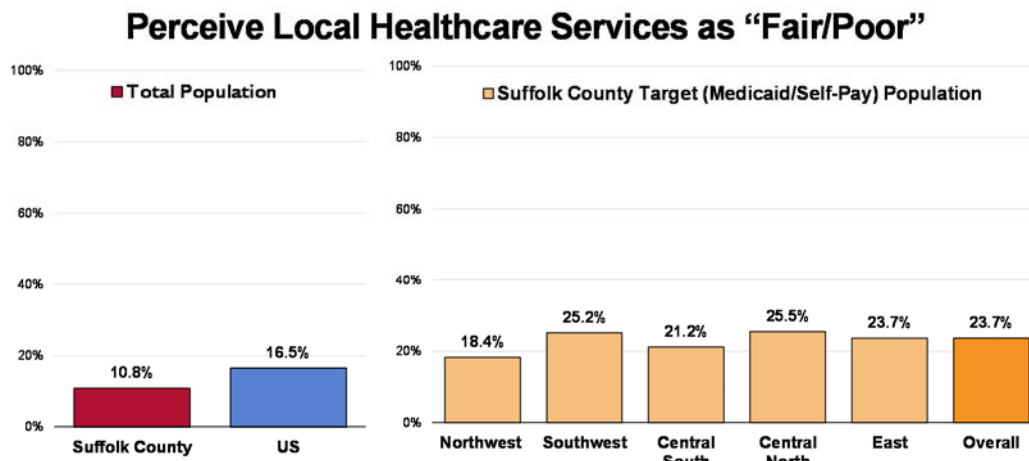
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 7]
          ● 2013 PRC National Health Survey, Professional Research Consultants, Inc.
Notes: ● Asked of all respondents.

Uninsured adults in Suffolk County are more critical of local healthcare services. In contrast, adults with private coverage are least likely to give low ratings of local services.

Perceive Local Healthcare Services as "Fair/Poor"
(By Insurance Type, Suffolk County 2014)
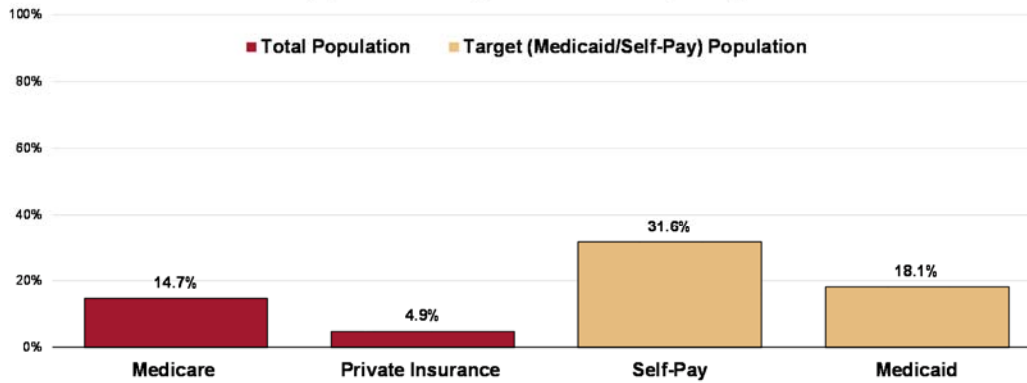
Sources: ● 2014 Community Health Surveys, Professional Research Consultants, Inc. [Item 7]
Notes: ● Asked of all respondents.
● Medicare and Private Insurance respondents are taken from the random countywide sample; Self-Pay and Medicaid respondents are from targeted patient sample.

III: DOMAIN 3 AND 4 METRICS

See Appendices 1 and 2

C: IDENTIFICATION OF THE MAIN HEALTH AND HEALTH SERVICES CHALLENGES

Main Health Challenges

While Suffolk County performs well on many measures of health, there are significant areas in need of improvement. Among clinical conditions, cancer incidence is high for the major areas, pointing to the need for broad based prevention, early detection and treatment programs. Chronic diseases, including cardiovascular disease, diabetes, and kidney disease need to be addressed through intensified efforts toward prevention and management. More programs aimed at broad-based risk reduction are needed as are public safety efforts and educational initiatives to reduce injury and violence prevention. Substance abuse treatment programs should be available to all who would benefit from them.

The PRC Population Survey summarized that needs representing the greatest opportunities in the Total Population as shown below.
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Suffolk County Total Population: Areas of Opportunity Identified Through This Assessment	
Access to Health Services	• Insurance Instability • Emergency Room Utilization
Cancer	• Cancer Incidence (Prostate, Lung, Colorectal, Cervical, Female Breast)
Chronic Kidney Disease	• Kidney Disease Deaths
Disability & Chronic Pain	• Activity Limitations • Sciatica/Chronic Back Pain
Heart Disease & Stroke	• Heart Disease Deaths
Immunization & Infectious Diseases	• Septicemia Deaths
Injury & Violence Prevention	• Unintentional Injury Deaths (Including Motor Vehicle)
Infant Health	• Prenatal Care
Nutrition, Physical Activity & Weight	• Population With Park Access • Meeting Physical Activity Recommendations • Vigorous Physical Activity • Prevalence of Overweight
Substance Abuse	• Alcohol Use • Drug-Induced Deaths

On all but a handful of measures, the Target Population experiences worse health outcomes than the population overall. In general, the Medicaid/Self-pay population has a much larger portion with fair/poor overall health status (39.4% vs. 16.9%) and more barriers to accessing health care (cost, getting a doctor's appointment, finding a doctor, inconvenient office hours, and lack of transportation).[115] The greatest areas of disparity are outlined in the table that follows. Some of these areas are explicitly addressed in DSRIP project selections and others will be addressed in the longer term.

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[115] PRC Population Survey

Suffolk County Target Population: Areas of Significant Health Disparity	

Access to Healthcare Services	• Difficulty Accessing Healthcare
	  ○ Cost of Prescriptions
	  ○ Cost of Physician Visits
	  ○ Inconvenient Office Hours
	  ○ Appointment Availability
	  ○ Difficulty Finding a Physician
	  ○ Lack of Transportation
	• Skipping/Stretching Prescription Doses
	• Specific Usual Source of Care
	• Emergency Room Utilization
	• Difficulty Getting Child's Healthcare in Past Year

Diabetes	• Diabetes Prevalence
Injury & Violence	• Victim of Domestic Violence
Mental Health	• Overall Mental Health Status • Diagnosed Depression • Symptoms of Chronic Depression • Stress
Nutrition, Physical Activity & Weight	• Fruit/Vegetable Consumption • Access to Fresh Fruits/Vegetables • Obesity • Childhood Overweight & Obesity • Lack of Leisure-Time Physical Activity • Meeting Physical Activity Recommendations
Oral Health	• Regular Dental Care • Dental Insurance Coverage
Respiratory Disease	• Chronic Obstructive Pulmonary Disease Prevalence • Childhood Asthma
Tobacco Use	• Cigarette Smoking • Tobacco Smoke in the Home
Vision Health	• Blindness/Uncorrectable Trouble Seeing • Regular Vision Care

Main Health Services Challenges

Suffolk County is served by a fragmented set of providers and payers. There are six main MCOs, eleven hospitals, three Health Homes, and a multitude of physicians, SNFs, home health providers, behavioral health sites, substance abuse clinics, County clinics and others. There are no defined mechanisms to ensure effective clinical communication, share important data on patient care gaps or utilization, or make significant progress in the care redesign needed to meet PCMH standards in most primary care practices. Until now, there has been little incentive to integrate care across the various components of the healthcare system and the focus has been on local optimization only. This fragmented approach results in care gaps (especially at handoffs) and poor clinical outcomes for some of the most vulnerable populations including Medicaid/self-pay populations with significant social, behavioral and medical issues.

Surveys revealed a healthcare system that, while having many assets, is ill-equipped to address some of the challenges related to population health needs. The ratio of primary care physicians to population

(84.9/100,000) is well below the statewide average (109.6/100,000). Though the County has many other healthcare resources, in most cases, there is a misalignment of providers with populations in need. While the eleven Suffolk hospitals are distributed throughout the submarkets, other providers tend to concentrate in more economically prosperous population centers. For example, there are no freestanding ambulatory surgical centers in the East, while both the Northwest and Southwest have two each; the East has no office based surgery practices, while the Central North has 27. A comparison of supply and demand for primary care physicians by submarket indicates shortages by submarket ranging from 7 FTE providers to almost 150 FTE. Rehabilitative services and ancillary and specialty providers also tend to be concentrated in the Central North, Southwest, and Northwest. Many providers do not accept Medicaid patients and the uninsured find cost to be a substantial barrier to access.

A review of inpatient capacity and hospital occupancy rates across the eleven Suffolk County hospitals suggests that there is excess inpatient capacity that should be repurposed to meet patient care needs on an outpatient basis. Hospital occupancy rates range from 46% to over 90% and several hospitals are under severe financial strain.

Findings from the Provider Capability Baseline Assessment
xG Health Solutions conducted a series of surveys and interviews of participants in the Suffolk PPS (hospitals, PCP practices, FQHC leadership, care management entities, and Medicaid MCOs) to better understand the initial starting point of the PPS stakeholders from the standpoint of system transformation. A number of major themes emerged:

- **Medical Neighborhood**: All providers are genuinely interested in improving the health of the populations they serve. A recurring theme is that effective communication does not exist between different components of the care delivery system, causing lost opportunities, poor continuity of care, and gaps in care access. However, several creative suggestions were offered to mitigate the challenges, including Nurse Practitioner (NP) clinics in K-Marts, expansion of Psychiatry residency programs, avoidance of a hospital-centric approach to care management, embedding a social worker in primary care sites, and performing post-discharge assessments of patient's status in the home.

- **Access Challenges**: Echoing sentiments from patients and Key Informants, there is a strong perception that access to care is constrained among the Medicaid and uninsured populations, This is true for PCPs, but is more pronounced for certain subspecialties and behavioral health. Low reimbursements by Medicaid FFS & Medicaid MCOs are cited as a root cause for low access. Access issues are further exacerbated by socioeconomic challenges, lack of advanced medical homes, suboptimal care coordination, and the lack of a medical neighborhood.

- **Socioeconomic Challenges**: Typical challenges among Medicaid/uninsured populations nationwide, in particular, lack of transportation to sites of care, distrust of the system among the undocumented, lack of affordable child care and housing, substance abuse, and a transient, migrant labor population. Limited health literacy, poor adherence with scheduled appointments and medications, and specific language barriers further complicated healthcare delivery. Eastern Suffolk County (more rural and remote) is less connected by public transport and has higher proportion of migrant labor and a higher degree of income disparity. Daily wage earners did not want to miss work until they were really sick, and migrant, undocumented labor preferred to remain in the shadows.

- **Lack of Advanced Medical Homes**: While the provider community is generally well-intentioned and there are examples of practices engaged with EHR Meaningful Use and NCQA PCMH recognition,

there are also material opportunities to inject efficiencies into the functioning of the practices—process efficiencies that would allow clinical staff to function at the top of their license. The expansion of hours would help in alleviating access barriers, and technological improvements would enable automated risk stratification, alerts, and monitoring of utilization patterns and quality metrics. Staffing enhancements such as dedicated care managers embedded in PCP practices would improve patient care and assist in managing utilization. A true advanced medical home concept with data-driven population management doesn't yet exist within the County.

- **Care Management (CM) Profile**: Care management exists, but it is fragmented across a set of Health Homes (HH), CM agencies, MCO efforts and inpatient discharge processes. In the outpatient setting, there are several care management initiatives in Suffolk led by Health Homes and a variety of care management agencies and Medicaid MCO plans, many of which have strong community relationships. Such functions are understaffed and quality is variable. As entities have evolved over time, they have done so in a fragmented manner leading to a lack of coordination and communication across the continuum. In addition, the scope of some efforts has been limited by regulations (e.g. Health Homes only focus on super utilizers), lack of resources, lack of standardized performance metrics, and a lack of aligned incentives. In the inpatient setting, CM is mostly focused on Utilization Management (UM) and Discharge (D/C) planning –but surveys revealed few warm handoffs into the community. There was limited evidence of multi-disciplinary rounding in hospitals. Few processes are in place to setup follow-up appointments, to complete timely transmission of discharge summaries, and to ensure that medication reconciliation has occurred. The rigor of interdisciplinary rounding and hospitalist programs varied notably across inpatient facilities. The use of observation status for patient evaluation also varies widely across the PPS hospitals. Most are in early stages of identifying candidates for observation status and ensuring robust care management in the OBS unit. Currently there is sub-optimal use of care management in the ED setting and a clear need for leveraging urgent care centers near EDs.

- **Connectivity Gaps:** Given the multiple disparate organizations delivering care, there are a multitude of IT systems that do not connect with each other. Alerts on ER visits, admissions and discharges are sporadic and based on negotiated agreements between MCOs, IP-facilities and PCP offices. As a result of poor notifications, the actions that should be taken at key inflection points in the patient journey are not executed.

Inadequate Behavioral Health Capacity

In part due to its unique history of large state institutions and strong reliance on state-operated services, the Long Island region presents significant challenges and opportunities for improvements. Pilgrim Psychiatric Center, which will reduce its census by 75 beds over the next three years, already has the longest length-of-stay of any adult state-operated psychiatric facility along with a 20% readmission rate. This length-of-stay may be due, at least in part, to affordable housing shortages in the region, but study of all contributing factors is warranted. Transportation to all mental health services can be problematic since most consumers do not drive and the existing bus system is cumbersome with multiple transfers required. In the more rural areas of eastern Suffolk County, public transportation and access to services is extremely limited.

Behavioral health resources are scattered throughout the County with a limited number of providers being present on the east end (both the North Fork and the South Fork). Among the providers on the east end, many do not accept insurance due to the cost of living being higher than the insurance reimbursement. There is a chronic shortage of prescribers across all of Suffolk County (psychiatrists and psychiatric nurse practitioners) leaving many of the hospitals and community-based organizations unable

to meet the demand. The shortage of professionals to meet the demand is demonstrated in low service rates across the region. Long Island children under age eight receive mental health services at a rate that is approximately 35% of the state average. Children ages nine through 17 receive services at a rate that is 50% of the state average. Individuals 18 to 64 receive services at a rate of 60% compared to the statewide average and for those over 65, at a rate of 55% compared to the statewide average. [116] Currently, all clinics report wait lists for clients coming to them from any source other than a direct referral from an inpatient psychiatric unit (due to the regulatory requirement of giving an appointment to those discharged within 5 days). Thirty-day readmissions rates at several hospitals in Suffolk County are higher than the statewide average due to lack of ambulatory capacity, shortage of case management options, transportations and housing issues.

Long Island has a varied socio-economic mix with a generally lower percentage of people with fee-for-service Medicaid than other regions of the state. This has interfered with people's ability to obtain services, since many private insurance companies have historically not covered more intensive services for individuals with behavioral health challenges (MI and SUD) such as residential treatment, PROS or ACT.

The problem is most profound in children's services where the low percentage of fee-for-service Medicaid enrollees threatens the fiscal viability of programs that are essential to preventing inpatient hospitalizations, due to significantly lower commercial payer reimbursement rates for even the most basic interventions. If programs cannot survive due to fiscal unsustainability, all those in need of behavioral health services are at risk. If reliance on inpatient services for children and adults is to reduce, then the ambulatory system needs to grow. Too many people are admitted to inpatient services and stay too long because the ambulatory resources are not existent or accessible.

Community-based behavioral health resources for both mental illness and substance use disorders will need to expand and partner with primary care, care managers, payers, community based organizations, peers and families to structure a response adequate to the needs of a region's population. We need to be realistic and responsible if success is our goal and not simply cost reduction. It is possible to achieve more value (better outcomes/less cost), but it will require an investment now for a return in the future.

Hospital Bed Capacity Analysis
As of July 2014, there were 3,099 total certified inpatient beds at Suffolk County hospitals and an additional 210 newborn bassinets. The occupancy rate of these beds varies significantly by bed type.

Bed Type	Certified Beds as of July 2014	CY 2012 Occupancy (%)	CY 2013 Occupancy (%)	CY 2014 (through July) Occupancy (%)
Alcohol	10	78.91	72.90	77.97
Brain Injury	0	0.00	0.00	0.00
Burn	6	34.47	15.34	11.48
Chem Dep Reh	40	97.35	99.27	97.85
Med/Surg	2,360	76.73	73.98	78.51
Neonatal	96	65.33	62.55	68.57
OB/GYN	204	59.16	56.90	58.00
Pediatric	91	51.80	50.15	43.74

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[116] 2013 OMH Patient Characteristics Survey

Bed Type	Certified Beds as of July 2014	CY 2012 Occupancy (%)	CY 2013 Occupancy (%)	CY 2014 (through July) Occupancy (%)
Psychiatric	213	79.93	80.81	84.58
Rehab	151	63.37	58.47	61.36
TCU	16	65.57	82.96	83.17
Newborn	210	42.19	40.64	40.89

Chemical Dependency, Psychiatric and Transitional Care Unit Beds in Suffolk County are fully utilized. Beds in these three categories (Chemical Dependency, Psychiatric and Transitional Care Unit) are over or at the NYSDOH's optimal occupancy of 85 percent. One could argue that given the County's 40-bed chemical dependency beds are consistently at 97.85 percent occupancy year over year that there is a need to add additional beds to the County's bed complement.

However, there is an opportunity to reduce certified beds counts within several bed categories as these categories contain large numbers of beds and year over year demonstrate sub-optimal occupancy rates significantly below the targeted 85 percent occupancy rate. These include medical/surgical beds (CYTD 78.51% occupancy), neonatal (CYTD 68.57% occupancy), OB/GYN (CYTD 58% occupancy), pediatric (CYTD 43.74% occupancy), rehab (CYTD 61.36% occupancy), and newborn bassinets (CYTD 40.89% occupancy).

Small inpatient units with highly variable occupancy rates should not be considered for reductions. Suffolk County hospitals contain two small sets of specialty beds (alcohol and burn) that have ten beds and six beds respectively. Because these units are very small, provide specialized care, and have highly variable occupancy rates day to day, they should not be targeted for possible inpatient bed reductions.

Approach to Addressing Excess Inpatient Capacity in Suffolk County
- Convene a series of meetings between the leadership of the hospitals within the Suffolk County PPS which would include all of the hospitals within Suffolk County. This would include hospital senior executives and board members. The keynote speaker at the first meeting would be a senior member of NYSDOH/NYS Medicaid Program to set the tone for the group's work and charge the group with a clear set of objectives, including the development of a data-driven plan to understand where there may be excess inpatient bed capacity and opportunities to repurpose that capacity in better support of the population's health needs.
- Using data reported by the hospital s to the Nassau-Suffolk Hospital, hold third-party facilitator guided conversations about the past, current, and projected future use of the inpatient beds within Suffolk County. This discussion would leverage objective data about the use of inpatient beds, projections of future use of beds, the calculated impact of the DSRIP projects and other reform efforts, as well as factor in each hospital's plans for growth and the project demand for these beds stemming from other populations (e.g. Medicare and commercially insured patients). A review of the demand for other types of care (e.g. ambulatory surgery) by submarket within Suffolk County would also be prepared, presented, and vetted by this group.
- This group would come to a consensus around guiding principles for targeting beds for possible closure/repurposing and growth of new, complimentary services, and finally a plan (work plan and budget) to make these changes within the County over the 5-year DSRIP implementation period.
- This group would continue to meet throughout the 5-year implementation period to ensure that the work plan was followed and that the budget was on target. CONs and other necessary regulatory filings would be made as needed.

Nursing Homes Beds
There are 42 nursing homes within Suffolk County. These facilities are primarily located in the western and central submarkets of Suffolk County. There are only seven (17%) nursing homes located in the eastern submarkets of the County. All facilities are Medicare certified. All but one facility (Mather) are Medicaid certified.

The 42 nursing homes within Suffolk County house a total of 8,561 beds. Of these beds, 8,477 beds (99%) are residential health care beds. In addition, there are a total of 48 ventilation dependent beds (0.6%), 28 of which are located at Gurwin Jewish Nursing and Rehabilitation Center in Commack (11725) and another 20 beds at Medford Multicare Center for Living in Medford (11763); 16 transitional care unit beds (0.2%) located at Mather Hospital in Port Jefferson (11777); and 20 traumatic brain injury beds (0.2%) located at St. Johnland Nursing Center in Kings Park (11754).

Based upon current occupancy data available for 38 of the 42 total nursing homes, the mean occupancy rate is 91.37% and the median occupancy rate is 92.50% across all bed categories. Woodhaven Nursing Home in Port Jefferson Station and Riverhead Care Center are outlier facilities that have significantly lower current occupancy rates of 67.10% and 75.70%, respectively. Conservatively, it appears that Suffolk County has the ability to reduce its nursing facility bed capacity by 50 beds. Trended utilization data and demand projections combined with the facilities' strategic plans for growth are needed to further define the PPS' ability to potentially reduce nursing home bed capacity in Suffolk County.

The nursing homes within the County provide a variety of services. All provide what NYSDOH terms baseline services. Ten facilities (24%) provide adult day services; eight (19%) provide clinical laboratory services; nine (%) provide diagnostic radiology services; six (14%) provide respite care; 6 (14%) provide outpatient PT, OT and speech and language pathology services; 2 (5%) provide services to ventilator dependent patients; one facility (Mather Hospital) provider transitional care unit services; one facility (Our Lady of Consolation Nursing and Rehabilitative Care Center) provides health fairs; and one facility (St. Johnland Nursing Center) provides services to patients with traumatic brain injuries.

There are several services not offered by any of Suffolk County's nursing home facilities: adult day health care – AIDS, AIDS, behavioral intervention services, coma services, dementia programs, hospice, limited transfusion services, and pediatric. Given Suffolk County's Medicaid recipient's great need for behavioral health services, an addition of behavioral intervention services and dementia programs may be warranted. Transfusion services to support the chronically ill population may also be warranted. Hospice services are also notably absent from those offered by Suffolk's nursing facilities.

D. SUMMARY OF THE ASSETS AND RESOURCES THAT CAN BE MOBILIZED

Expansion of Primary Care based on the FQHC Model
Primary care is the backbone of creating a responsive healthcare system, but in Suffolk County there is a serious shortage of primary care providers. While state and national programs are needed to address some of the fundamental barriers to building an adequate workforce, there are resources within the County that the Suffolk PPS can leverage in the short term. One of our key goals is to build closer a closer relationship with Hudson River Healthcare (HRH). HRH is taking over the operation of the Suffolk County health clinics and Stony Brook Medicine is supporting them in their conversion to FQHCs. The Suffolk PPS plans to work with them to expand not only general primary care, but prenatal care for high risk women, and integrated behavioral health-primary care models.

Expand the Use of Nurse Practitioners (NP)

Some promising models of NP led clinics that operate from retail stores are emerging in Suffolk County. Some have achieved Level 3 PCMH certification and provide excellent continuity of care and expanded hours of service. To promote the effectiveness of this model, we will seek partnerships with such clinics that rely on evidence-based guidelines, rigorous quality measurement frameworks, and quality improvement initiatives for non-physician providers. A significant barrier to achieving more dramatic and rapid deployment has been the disincentives created by payment policies. Medicare and Medicaid generally reimburse less for services delivered by NPs and PAs than for the same services when performed by physicians. We intend to address this through partnerships with MCOs that will make this a feasible model for expansion.

Create Closer Integration with Health Homes

While all three Health Homes are partners in the Suffolk PPS, they have been slow to become integrated into the operations and processes of the major County providers. We intend to forge closer relationships with the Health Homes and to make use of their substantial care management capabilities within our larger framework. At the same time, the Stony Brook Medicine bioinformatics teams will work to build analytical models that target complex patients and map patient clinical characteristics to utilization levels and payment models that support resource-intensive targeting and care management efforts.

Leverage the Capabilities of PPS Hospitals to bring HIT and Telemedicine into the Community

Expanded use of HIT, including electronic health records (EHRs) and interoperable data exchange, will allows primary care practices and other providers to organize and disseminate information across the delivery system in real time, thus improving care coordination, increasing quality, and lowering costs. Broader implementation of HIT can increase system-wide capacity to meet increased demand, improving access to primary care. Some innovative use of telemedicine is planned, including for mental health and maternal fetal medicine consultations.

Leverage Community-based Organizations (CBOs)

While Suffolk County has many highly dedicated and motivated CBOs, there is an opportunity to increase the use of such organizations as partners in population health. CBOs can provide support services such as care transitions, chronic disease management, medication management, nutrition support, transportation, home and family assessments, health benefits counseling, and care giver support. Often, they may be the most cost effective way to provide such services. To date in Suffolk County, such services have been fragmented for populations in certain subareas. The Suffolk PPS will provide a much greater opportunity for assuring that these services are directed to the populations in need.

Build a Diverse Workforce and Improve Cultural Competency (CC) and Health Literacy (HL)

Health disparities are due in part to a workforce that has a different racial and ethnic profile from the population it serves. To reduce health disparities, the Suffolk PPS will encourage the educational institutions in the County to advance this goal. This will include: designing and implementing educational programs to train, and advance faculty from diverse backgrounds; recruiting, training, and retaining a workforce that is more reflective of the diversity of the County; designing and implementing educational programs to ensure that the workforce is both culturally competent and family centered; and engaging families, youth, and communities in the development and ongoing implementation of training programs for the workforce.

E: SUMMARY CHART OF THE PROJECTS TO BE IMPLEMENTED

See Appendix 1

PRC Population Survey

This assessment incorporates data from both quantitative and qualitative sources. Quantitative data input includes primary research (the PRC Community Health Telephone Survey) and secondary data collected from existing sources and data sets. Qualitative data input includes primary research gathered through an Online Key Informant Survey.

Survey Instrument - The survey instrument used for this study is based largely on the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), as well as various other public health surveys and customized questions addressing gaps in indicator data relative to health promotion and disease prevention objectives and other recognized health issues. The final survey instrument was developed by Stony Brook Medicine and PRC.

The same survey was administered to two distinct populations: 1) a random sample of the Total Population; and 2) a sample of recent patients in the Target Population (those who have Medicaid or are uninsured/self-pay).

Community Defined for This Assessment - The study area for the survey effort is Suffolk County, New York, defined by each of the residential zip codes comprising the County. For the *Target Population*, the community was divided into five geographies, as outlined in the map below.
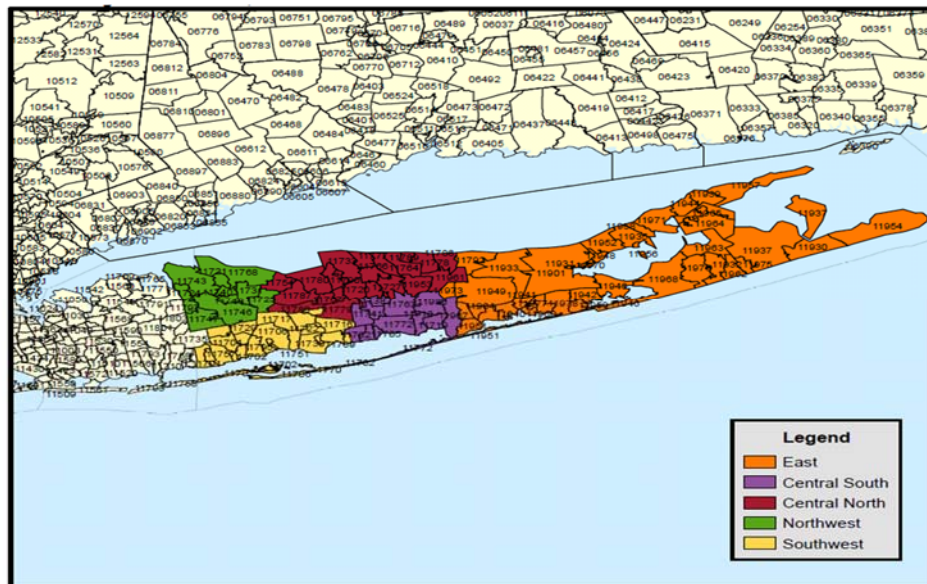
Sample Approach & Design

A precise and carefully executed methodology is critical in asserting the validity of the results gathered in the *PRC Community Health Survey*. Thus, to ensure the best representation of the population surveyed, a telephone interview methodology — one that incorporates both landline and cell phone interviews — was employed. The primary advantages of telephone interviewing are timeliness, efficiency and random-selection capabilities.

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The sample design used for this effort consisted of:

- **Total Population:** A random sample of 400 individuals age 18 and older in Suffolk County.

- **Target Population:** A sample of 500 County residents who have Medicaid, Medicaid Managed Care or who are uninsured, stratified as 100 in each of the five County subdivisions described above.

This sample was drawn from phone numbers of recent patients of area hospitals (including Stony Brook University Hospital, HRH Care, Catholic Health Services of Long Island, Peconic Bay Medical Center, and North Shore-LIJ Health System). Criteria included: patients with inpatient or outpatient encounters using electronic medical records (EMR) in calendar year 2013, or any ER visit in calendar year 2013; records showing self-pay, Medicaid or Medicaid Managed Care; and a date of birth of 7/1/1949 through 7/1/1996.

These patient phone numbers were randomized and contacted; while interviewers did not specifically ask for the patient of record, they did confirm that the respondent for the Target Population survey sample is currently uninsured or covered through Medicaid or Medicaid Managed Care. Thus, any patients of record who might have acquired other coverage since their last encounter were excluded from the sample.

Once the interviews were completed, each of these samples was weighted in proportion to the actual population distributions so as to appropriately represent Suffolk County as a whole (for both the Total Population and the Target Population). All administration of the surveys, data collection and data analysis was conducted by Professional Research Consultants, Inc. (PRC).

Sampling Error
Total Population: For statistical purposes, the maximum rate of error associated with a sample size of 400 respondents (Suffolk County Total Population) is ±4.9% at the 95 percent level of confidence.

Expected Error Ranges for a Sample of 400 Respondents at the 95 Percent Level of Confidence
(Suffolk County Total Population, 2014)
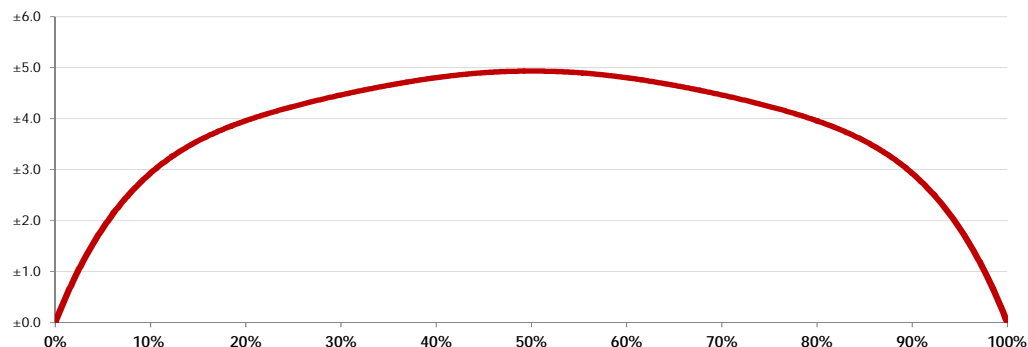
Note: • The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response. A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.
Examples: • If 10% of the sample of 400 respondents answered a certain question with a "yes," it can be asserted that between 7.1% and 12.9% (10% ± 2.9%) of the total population would offer this response.
• If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 45.1% and 54.9% (50% ± 4.9%) of the total population would respond "yes" if asked this question.

Target Population: The maximum rate of error associated with a sample size of 500 respondents ("Target Population") is ±4.4% at the 95 percent level of confidence.

Expected Error Ranges for a Sample of 500
Respondents at the 95 Percent Level of Confidence
(Suffolk County Target [Medicaid/Self-Pay] Population, 2014)
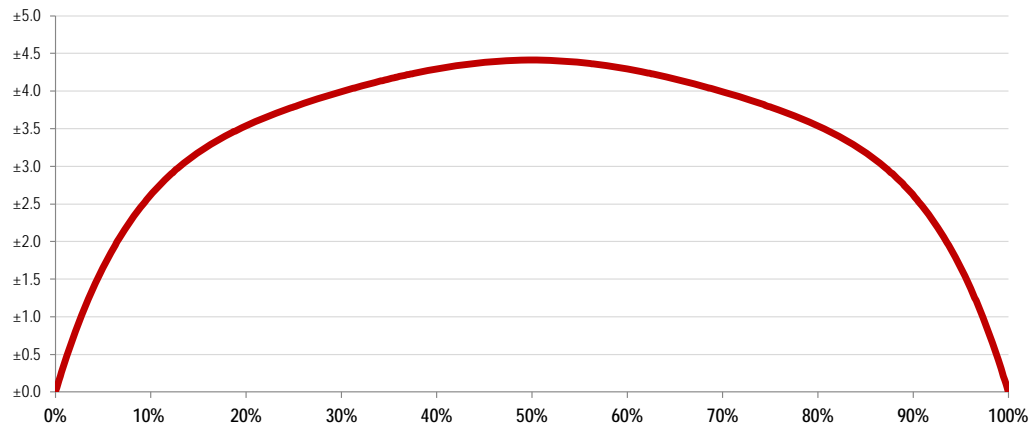
Note: • The "response rate" (the percentage of a population giving a particular response) determines the error rate associated with that response.
      A "95 percent level of confidence" indicates that responses would fall within the expected error range on 95 out of 100 trials.
Examples: • If 10% of the sample of 500 respondents answered a certain question with a "yes," it can be asserted that between 7.4% and 12.6% (10% ± 2.6%)
      of the total population would offer this response.
      • If 50% of respondents said "yes," one could be certain with a 95 percent level of confidence that between 45.6% and 54.4% (50% ± 4.4%)
      of the total population would respond "yes" if asked this question.

Sample Characteristics

To accurately represent the population studied, PRC strives to minimize bias through application of a proven telephone methodology and random-selection techniques. And, while this random sampling of the population produces a highly representative sample, it is a common and preferred practice to "weight" the raw data to improve this representativeness even further. This is accomplished by adjusting the results of a random sample to match the geographic distribution and demographic characteristics of the population surveyed (poststratification), so as to eliminate any naturally occurring bias. Specifically, once the raw data are gathered, respondents are examined by key demographic characteristics (namely gender, age, race, ethnicity, and poverty status) and a statistical application package applies weighting variables that produce a sample which more closely matches the population for these characteristics. Thus, while the integrity of each individual's responses is maintained, one respondent's responses may contribute to the whole the same weight as, for example, 1.1 respondents. Another respondent, whose demographic characteristics may have been slightly oversampled, may contribute the same weight as 0.9 respondents.

Total Population: The following chart outlines the characteristics of the Suffolk County Total Population sample for key demographic variables, compared to actual population characteristics revealed in census data. [Note that the sample consisted solely of area residents age 18 and older; data on children were given by proxy by the person most responsible for that child's healthcare needs, and these children are not represented demographically in this chart.]

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Population & Survey Sample Characteristics
(Suffolk County Total Population, 2014)
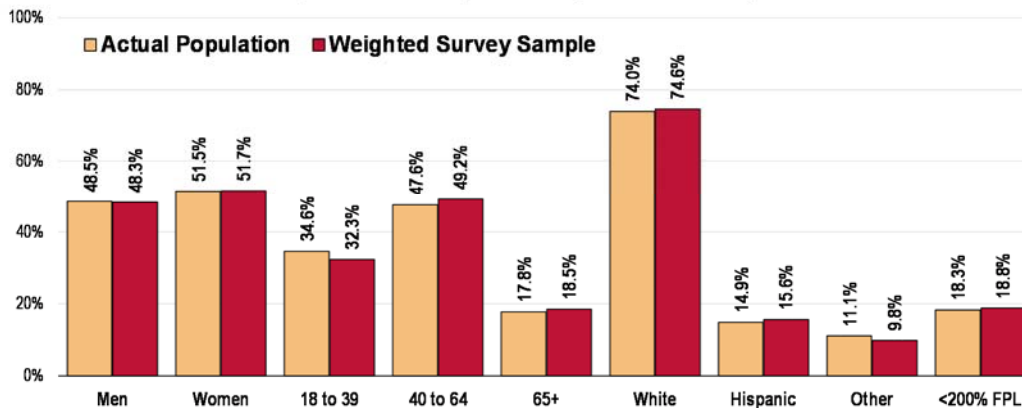
Sources:
- Census 2010, Summary File 3 (SF 3). US Census Bureau.
- 2014 Community Health Surveys, Professional Research Consultants, Inc.

A further note is that the poverty descriptions and segmentation used in this report are based on administrative poverty thresholds determined by the US Department of Health & Human Services. These guidelines define poverty status by household income level and number of persons in the household *(e.g., the 2014 guidelines place the poverty threshold for a family of four at $23,850 annual household income or lower)*. In sample segmentation: "**low income**" refers to community members living in a household with defined poverty status <u>or</u> living just above the poverty level, earning up to twice the poverty threshold; "**mid/high income**" refers to those households living on incomes which are twice or more the federal poverty level.

The sample design and the quality control procedures used in the data collection ensure that the Total Population sample is representative. Thus, the findings may be generalized to the population of community members in Suffolk County with a high degree of confidence.

Online Key Informant Survey

To solicit input (specifically about the Target Population) from Key Informants, those individuals who have a broad interest in the health of the community, an Online Key Informant Survey was also implemented as part of this process. A list of recommended participants was provided by Stony Brook Medicine; this list included names and contact information for physicians, public health representatives, other health professionals, social service providers, and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work, as well as of the community overall.

Key Informants were first contacted by letter to request their participation; follow-up emails were then sent with a link to take a survey online. Final participation included 118 respondents, as outlined in the following chart.

Key Informant Participation		
Key Informant Type	Number Invited	Number Participating
Physicians	47	11

Key Informant Participation		
Public Health Professionals	18	15
Other Health Providers	105	59
Social Service Providers	46	24
Other Community/Business Leaders	33	9
TOTAL	249	118

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations, or other medically underserved populations.

In the online survey, Key Informants were asked to rate the degree to which various health issues are a problem for the Target Population in Suffolk County. Follow-up questions asked them to describe why they identify problem areas as such, and how these might be better addressed. Results of their ratings, as well as their verbatim comments, are included throughout this report as they relate to the various other data presented.

> *NOTE: These findings represent qualitative rather than quantitative data. The Online Key Informant Survey was designed to gather input from participants regarding their opinions and perceptions of the health of the residents in the area. Thus, these findings are based on perceptions,*

Provider and Community Resource Inventories and Capacity Assessment
Stony Brook Medicine staff collected provider and community resource information from surveys of PPS partners, internet searches, and interviews conducted by PRC, SBUH faculty staff, and xG Health Solutions. All PPS partners and many community agencies provided information that allowed us to get a deeper sense of their resources, capacity, and capabilities.

Provider Capability Baseline Assessment
As part of its consulting engagement, xG Health Solutions conducted a series of surveys and interviews with PPS members to assess the capabilities and gaps in the local healthcare system. Along with a general survey, they interviewed 11 hospital administrators, three clinics, and six entities with a strong care management function. Considerable focus was placed on assessing both primary care and the care management/coordination landscape to determine both the strengths and gaps in these essential functions.

Secondary Data Analysis
The secondary data analysis was done largely by an experienced team in clinical data, biomedical informatics, public health and planning. It began with an extensive review of the data released on the public NYSDOH data portal and the DSRIP performance site. A PubMed search identified published studies associated with the target population.

Public health resources used to inform the analysis included County specific data from the NYS Prevention Agenda and the Community Health Assessment of Suffolk County. Additional sources used in the CNA include: Behavioral Risk Factor Surveillance System, NY Vital Statistics, and the American Community Survey estimates. Dashboards, PQI/PDIs (preventable admissions,) PPV (preventable ED visits), and PPR chains (readmissions) were analyzed for the PPS target area.

Primary data analyses (spatial & comorbidities) were performed on NY SPARCS Limited Data Set. PQI/PDI inpatient discharges were calculated directly on SPARCS inpatient discharges using AHRQ software. Comorbidities associated with inpatient and ED visits were made using clinical groups defined by AHRQ's CCS groupers.

Where countywide data was not available analysis of Stony Brook Medicine (SBM) data was used to serve as a proxy, as SBM is the largest safety net hospital in Suffolk County.

H.   APPENDICES

Appendix 1 - Domain 3 Metrics

Appendix 2 - Domain 4 Metrics: Improve Health Status and Reduce Health Disparities

Appendix 3 – Summary Chart of Projects to be Implemented

Appendix 1 – Domain 3 Metrics (as available)

Measure Name	Suffolk County Baseline	New York State Baseline	Measure and units	Explanation of challenges and/or source
Antidepressant Medication Management	52%	50%		DSRIP Clinical Chart Book 2012 Measure Year
diabetes Monitoring for People with diabetes and Schizophrenia	67%	68%		DSRIP Clinical Chart Book 2012 Measure Year
diabetes Screening for People with Schizophrenia./BPD Using Antipsychotic Med.	81%	79%		DSRIP Clinical Chart Book 2012 Measure Year
Cardiovascular Monitoring for People with CVD and Schizophrenia.	[73.3, 92.3]	82.2	%	2013 QARR Report - Cardiovascular Monitoring for People with Cardiovascular Disease and Schizophrenia; using the 5 plans that cover Suffolk County
Follow-up care for Children Prescribed ADHD Medications	48%	56%		DSRIP Clinical Chart Book 2012 Measure Year
Follow-up after hospitalization for Mental Illness	53%	55%		DSRIP Clinical Chart Book 2012 Measure Year
Adherence to Antipsychotic Medications for People with Schizophrenia	70%	64%		DSRIP Clinical Chart Book 2012 Measure Year
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET)	76%	78%		DSRIP Clinical Chart Book 2012 Measure Year
PQI # 7 (HTN)	89.5	89.65	Risk adjusted rate per	DSRIP Medicaid PQIs 2012

Measure Name	Suffolk County Baseline	New York State Baseline	Measure and units	Explanation of challenges and/or source
			100,000 people	
Aspirin Discussion and Use	[14.7, 29.7]	28.1	%	2013 QARR Report - Aspirin Use; using the 5 plans that cover Suffolk County
Medical Assistance with Smoking Cessation	[77.2, 83.1], [51.5, 64.4], [45,8, 54.4]	78.2, 55.6, 46.5	%	2013 QARR Report - Advising Smokers to Quit, Discussing Smoking Cessation Medications, Discussing Smoking Cessation Strategies; using the 5 plans that cover Suffolk County
Flu Shots for Adults Ages 50 – 64	[38.5, 48.4]	43.9	%	2013 QARR Report - Flu Shots for Adults; using the 5 plans that cover Suffolk County
PQI # 1 (DM Short term complications)	115.71	116.77	Risk adjusted rate per 100,000 people	DSRIP Medicaid PQIs 2012
Comprehensive diabetes screening (HbA1c, lipid profile, dilated eye exam, nephropathy)	74%	80%		DSRIP Clinical Chart Book 2012 Measure Year
Comprehensive diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)	[26.3, 38.7]	32.3	%	2013 QARR Report - Managing diabetes Outcomes -Poor HbA1c Control; using the 5 plans that cover Suffolk County
Comprehensive diabetes care - LDL-c control (<100mg/dL)	[37.1, 46.0]	42.7	%	2013 QARR Report - Managing diabetes Outcomes - Lipids Controlled (<100 mg/dL); using the 5 plans that cover Suffolk County
Medical Assistance with Smoking Cessation	[77.2, 83.1], [51.5, 64.4], [45,8, 54.4]	78.2, 55.6, 46.5	%	2013 QARR Report - Advising Smokers to Quit, Discussing Smoking Cessation Medications, Discussing Smoking Cessation Strategies; using the 5 plans that cover Suffolk County
Flu Shots for Adults Ages 50 – 64	[38.5, 48.4]	43.9	%	2013 QARR Report - Flu Shots for Adults; using the 5 plans that cover Suffolk County

Measure Name	Suffolk County Baseline	New York State Baseline	Measure and units	Explanation of challenges and/or source
PQI # 15 Adult Asthma	132.75	142.38	Risk adjusted rate per 100,000 people	DSRIP Medicaid PQIs 2012
PDI # 14 Pediatric Asthma	213.2	357.6	Risk adjusted rate per 100,000 people	DSRIP Medicaid PQIs 2012
Asthma Medication Ratio	[63, 66.5]	64.1	%	2013 QARR Report - Medicaid Managed Care - 5 to 64 using; using the 5 plans that cover Suffolk County
Medication Management for People with Asthma	[35.2, 40.2]	36.3	%	2013 QARR Report - Medical Management for People with Asthma 75% Days Covered (Ages 5-64); using the 5 plans that cover Suffolk County

Appendix 2 - Domain 4 Metrics: Improve Health Status and Reduce Health Disparities

		Source	Geographic Granularity	Suffolk County Baseline	New York State Baseline	Suffolk is higher or equal
	Improve Health Status and Reduce Health Disparities (required for all projects)					
1.	Percentage of premature death (before age 65 years)	NYS NYSDOH Vital Statistics	State, County	22.60	21.90	TRUE
2.	*Ratio of Black non-Hispanics to white non-Hispanics*			1.95	2.13	FALSE
3.	*Ratio of Hispanics to white non-Hispanics*			2.25	2.33	FALSE
4.	Age-adjusted preventable hospitalizations rate per 10,000 - Aged 18+ years	SPARCS	Statewide Region County	137.90	120.70	TRUE
5.	*Ratio of Black non-Hispanics to white non-Hispanics*			1.73	1.88	FALSE
6.	*Ratio of Hispanics to white non-Hispanics*			1.75	1.68	TRUE
7.	Percentage of adults with health insurance - Aged 18-64 years	US Census		86.00		
8.	Age-adjusted percentage of adults who have a regular health care provider - Aged 18+ years	BRFSS	Statewide NYC/ROS County	84.50	84.60	FALSE
	Promote Mental Health and Prevention Substance Abuse					
66.	Age-adjusted percentage of adults with poor mental health for 14 or more days in the last month	BRFSS	Statewide NYC/ROS County	13.80	11.80	TRUE
67.	Age-adjusted percentage of adult binge drinking during the past month	BRFSS	Statewide NYC/ROS County	17.30	17.40	FALSE
68.	Age-adjusted suicide death rate per 100,000	NYS NYSDOH Vital Statistics	State, County	9.00	9.50	FALSE

		Source	Geographic Granularity	Suffolk County Baseline	New York State Baseline	Suffolk is higher or equal
	Prevent Chronic Diseases					
21.	Percentage of adults who are obese	BRFSS	Statewide NYC/ROS County	29.10	27.00	TRUE
22.	Percentage of children and adolescents who are obese	BRFSS	Statewide NYC/ROS County	17.50	17.60	FALSE
23.	Percentage of cigarette smoking among adults	BRFSS	Statewide NYC/ROS County	14.40	17.30	FALSE
24.	Percentage of adults who receive a colorectal cancer screening based on the most recent guidelines - Aged 50-75 years	BRFSS	Statewide	73.70	70.00	TRUE
25.	Asthma emergency department visit rate per 10,000	SPARCS	Statewide Region County	54.10	50.80	TRUE
26.	Asthma emergency department visit rate per 10,000 - Aged 0-4 years	SPARCS	Statewide Region County	134.40	117.20	TRUE
27.	Age-adjusted heart attack hospitalization rate per 10,000	SPARCS	Statewide Region County	18.60	16.10	TRUE
28.	Rate of hospitalizations for short-term complications of diabetes per 10,000 - Aged 6-17 years	SPARCS	Statewide Region County	2.70	2.80	FALSE
29.	Rate of hospitalizations for short-term complications of diabetes per 10,000 - Aged 18+ years	SPARCS	Statewide Region County	4.40	5.40	FALSE
	Prevent HIV/STDs					
33.	Newly diagnosed HIV case rate per 100,000	NYS HIV Surveillance System		6.4	6.7	FALSE

		Source	Geographic Granularity	Suffolk County Baseline	New York State Baseline	Suffolk is higher or equal
34.	*Difference in rates (Black and white) of new HIV diagnoses*			15.8	24	FALSE
35.	*Difference in rates (Hispanic and white) of new HIV diagnoses*			8.6	11.2	FALSE
36.	Gonorrhea case rate per 100,000 women - Aged 15-44 years	NYS STD Surveillance System		89.7	192.8	FALSE
37.	Gonorrhea case rate per 100,000 men - Aged 15-44 years	NYS STD Surveillance System		75.8	148.7	FALSE
38.	Chlamydia case rate per 100,000 women - Aged 15-44 years	NYS STD Surveillance System		867.6	1241.6	FALSE
39.	Primary and secondary syphilis case rate per 100,000 males	NYS STD Surveillance System		3.5	3.9	FALSE
40.	Primary and secondary syphilis case rate per 100,000 females	NYS STD Surveillance System		0.3*	0.3	TRUE
	Promote Healthy Women, Infants, and Children					
41.	Percentage of preterm births	NYS NYSDOH Vital Statistics	State, County	12.2	10.9	TRUE
42.	*Ratio of Black non-Hispanics to white non-Hispanics*			1.75	1.56	TRUE
43.	*Ratio of Hispanics to white non-Hispanics*			1.13	1.19	FALSE
44.	*Ratio of Medicaid births to non-Medicaid births*			1.13	1.12	TRUE

		Source	Geographic Granularity	Suffolk County Baseline	New York State Baseline	Suffolk is higher or equal
45.	Percentage of infants exclusively breastfed in the hospital	NYS NYSDOH Vital Statistics	State, County	33.2	48.9	FALSE
46.	*Ratio of Black non-Hispanics to white non-Hispanics*			0.59	0.55	TRUE
47.	*Ratio of Hispanics to white non-Hispanics*			0.62	0.64	FALSE
48.	*Ratio of Medicaid births to non-Medicaid births*			0.6	0.72	FALSE
49.	Maternal mortality rate per 100,000 births	NYS NYSDOH Vital Statistics	State, County	20.6	20.6	TRUE
54.	Percentage of children with any kind of health insurance - Aged under 19 years	U.S. Census Bureau, Small Area Health Insurance Estimates	State, County	95.7		
56.	*Ratio of low-income children to non-low income children*			2.49	2.46	TRUE
57.	Adolescent pregnancy rate per 1,000 females - Aged 15-17 years	NYS NYSDOH Vital Statistics	State, County	11.1	14.8	FALSE
58.	*Ratio of Black non-Hispanics to white non-Hispanics*			4.5	3.99	TRUE
59.	*Ratio of Hispanics to white non-Hispanics*			4.36	2.92	TRUE
60.	Percentage of unintended pregnancy among live births	Pregnancy Risk Assessment Monitoring System	State	22.1	28.1	FALSE
61.	*Ratio of Black non-Hispanics to white non-Hispanics*			2.87	2.05	TRUE
62.	*Ratio of Hispanics to white non-Hispanics*			1.94	1.38	TRUE
63.	*Ratio of Medicaid births to non-Medicaid births*			2.01	1.9	TRUE

		Source	Geographic Granularity	Suffolk County Baseline	New York State Baseline	Suffolk is higher or equal
64.	Percentage of women with health coverage - Aged 18-64 years	U.S. Census Bureau Small Area Health Insurance Estimates	State, County	88.4		
65.	Percentage of live births that occur within 24 months of a previous pregnancy	NYS NYSDOH Vital Statistics	State, County	18	21.1	FALSE
	* Fewer than 10 events in the numerator, therefore the rate/percentage is unstable.					

Appendix 3 – Summary Chart of Projects to be Implemented

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
CNA 1	Need for Delivery System Integration Across the Care Continuum	Suffolk County has many assets and resources, but there is general fragmentation and misalignment of resources and needs. There is excess inpatient capacity, but shortages in outpatient and community-based resources. In particular, there is a severe shortage of primary care and behavioral health providers. Resources are often not located in close proximity to Medicaid/uninsured hotspots. The care coordination infrastructure lacks standardization, there is minimal health information connectivity, and providers are not using staff at the top of their licenses. No hospital in the County has a robust transitional care program with a full package of 30-day transition interventions. Few primary care practices have Patient Centered Medical Home (PCMH) designation and the ratio of primary care providers/population falls well below national averages. Measures of avoidable utilization (PQI, PPV, and PPR) are high.	**Suffolk PPS Primary Data Collection** Provider Capability Baseline Assessment **Potentially Preventable Readmissions** New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011 . Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn **Prevention Quality indicators (PQI/PDI) – Composites of all Measures** New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from:

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
			https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

Potentially Preventable Emergency Room Visits
New York State Department of Health [DOH]. (2014, July). Medicaid Potentially Preventable Emergency Visit (PPV) 2012 Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011. Retrieved July 15, 2014 from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka |
| CNA 2 | Need to provide a 30 day supported transition period to reduce 30 day readmissions for chronic health conditions | Suffolk County compares unfavorably to NYS related to mortality rates for kidney disease and respiratory disease. There are disparities among Medicaid/uninsured populations related to diabetes and many chronic disease risk factors. No hospital in the County has a comprehensive transitional care program | **Suffolk PPS Primary Data Collection**
PRC Population and Key Informant Surveys

Potentially Preventable Readmissions
New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011 . Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn

Prevention Quality indicators (PQI/PDI) Composites of all Measures; Individual PQIs |

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
			New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn

New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

Potentially Preventable Emergency Room Visits
New York State Department of Health [DOH]. (2014, July). Medicaid Potentially Preventable Emergency Visit (PPV) 2012 Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011. Retrieved July 15, 2014 from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka |

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
CNA 3	Need to avoid unnecessary transfers of SNF patients to acute care facilities.	Few SNFs participate in Health Information Exchanges (HIE) and many do not use INTERACT or INTERACT-like tools to prevent transfers. . Among dual eligible beneficiaries in SNFs, 40% of hospitalizations are unnecessary and 23.5% of people admitted to a post-acute care SNF were re-hospitalized within 30 days.	**Suffolk PPS Primary Data Collection** Provider and Community Resource Inventories and Capacity Assessment (Surveys of SNFs in the Suffolk PPS conducted in October/ November 2014) **Potentially Preventable Readmissions** New York State Department of Health [DOH]. (2014, June). Medicaid Hospital Inpatient Potentially Preventable Readmission (PPR) Rates by Hospital: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Hospital-Inpatient-Potentially-Preventabl/ckvf-rbyn **Prevention Quality indicators (PQI/PDI) – Composites of all Measures** New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn New York State Department of Health [DOH]. (2014, May). Medicaid Inpatient Prevention Quality Indicators (PDI) for Pediatric Discharges by Patient County: Beginning 2011. Retrieved

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
			July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/64yg-akce

Potentially Preventable Emergency Room Visits
New York State Department of Health [DOH]. (2014, July). Medicaid Potentially Preventable Emergency Visit (PPV) 2012 Medicaid Potentially Preventable Emergency Visit (PPV) Rates by Patient County: Beginning 2011. Retrieved July 15, 2014 from: https://health.data.ny.gov/Health/Medicaid-Potentially-Preventable-Emergency-Visit-P/cr7a-34ka

Nursing Home Transfers
Mor, V., Intrator, O., Feng, Z., & Grabowski, D. C. (2010). The revolving door of rehospitalization from skilled nursing facilities. Health Affairs, 29(1): 57-64. doi: 10.1377/hlthaff.2009.0629 |
| CNA 4 | Need for observational programs in hospitals | There is a high level of short stay (length of stay less than 2 days) admissions in Suffolk County -- 27% of Medicaid admissions (9,475) were short stay. This population might have been served by an observation status if the capacity were available. Along with PQI conditions, behavioral health conditions | **Short Stay Admissions**
Inpatient volume estimated from SPARCS 2012 LDS for Medicaid members served in a Suffolk facility; Chronic disease prevalence from the Chronic Disease Data for 2012 Medicaid Population; Population size data from NYSDOH

Suffolk PPS Primary Data Collection |

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
		are top drivers of short hospital stays. No community providers are currently receiving information about these patients and none have a mechanism to directly admit patients to the observation units. Many of these admissions are the result of insufficient outpatient chronic care and care coordination.	Provider Capability Baseline Assessment related to care coordination inadequacies.
CNA 5	Need to engage, educate and integrate uninsured and low/non utilizing Medicaid members to encourage them to use primary care and preventive services appropriately.	Uninsured populations have very limited access to care. Many use the ED as their only source of care.	**Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys **Uninsured ED visits** New York State Department of Health [DOH]. (2014, April). Outpatient Visits (SPARCS Limited Data Set): 2012.
CNA 6	Need for greater integration of primary care behavioral health services	Behavioral health care is largely inaccessible. Many patients have coexisting behavioral and physical health conditions. Key Informant rate behavioral health as the service with the greatest access barriers.	**Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys New York State Office of Mental Health Patient Characteristics Survey diabetes Monitoring for People with diabetes and Schizophrenia – HEDIS (unfavorable) Initiation of Alcohol and Other Drug Dependence Treatment – HEDIS (unfavorable) Follow-up after Hospitalization for Mental Illness within 30 days - HEDIS (unfavorable)

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
CNA 7	Need for the evidence-based disease management strategies in medical practice for adults with or at high risk for cardiovascular disease	Heart disease is the leading cause of death in the County. Disparities exist in Medicaid and uninsured populations vs. population overall. Quality measures fall below statewide baselines in many cases. Health Disparities - Unfavorable rates relative in the Medicaid/uninsured vs. the overall population relative to: • Taking action to control high blood pressure • Cardiovascular risk factors • Smoking	**Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys PQI 13 (Angina without Procedure) 2013 QARR Report - Cardiovascular Monitoring for People with Cardiovascular Disease and Schizophrenia 2013 QARR Report - Aspirin Use 2013 QARR Report - Advising Smokers to Quit, Discussing Smoking Cessation Medications 2013 QARR Report - Flu Shots for Adults
CNA 8	Need for the evidence-based disease management strategies in medical practice for adults with or at high risk for diabetes	Diabetes rate is higher in Suffolk (11%) than statewide (9.7%). Health Disparities - Among the Medicaid members and the uninsured, the rate is 15.7%. Managing diabetes will control avoidable hospitalizations and preventable ED visits. The overall prevalence of diabetes led us to prioritize this over HIV/AIDS, renal disease, and palliative care. Renal disease and palliative care are included as components of other projects (2.b.iv, and 2.b.vii)	**Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys PQI_3 diabetes Long-term Complications (unfavorable O/E ratio risk adjusted) For the individual Adult PQIs, Suffolk rates exceed statewide rates for diabetes Short Term Complications (1.06), diabetes Long Term Complications (1.19), and Uncontrolled diabetes (1.33). Also, diabetes Adult Composite (1.15). Office of Quality and Patient Safety, 2014 Created by Office of Health Systems Management, NYSDOH https://www.health.ny.gov/health_care/medic

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
			aid/redesign/dsrip/performance_data/docs/chartbook1_avoidable_hospitalization_long_island.pdf Diabetes Monitoring for People with diabetes and Schizophrenia – HEDIS (unfavorable) Comprehensive diabetes Care – HBA1c Testing – HEDIS unfavorable)
CNA 9	Need for improved self-management skills in adults and children with asthma.	Asthma is highly prevalent and the cause of many unnecessary hospitalizations and ED visits. Better self-management could lead to reductions in unnecessary utilization. Health Disparities - In the Medicaid/uninsured population, 11.9% of children currently have asthma, which is more than twice the countywide prevalence	**Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys **Prevention Quality indicators (PQI/PDI)** **Composites of all Measures; Individual PQIs** PQIs_5 and 15 (Adult Asthma composite) exceed the statewide rate PDI_14 (Pediatric Asthma) exceeds the upstate rate New York State Department of Health [DOH]. (2014, June). Medicaid Inpatient Prevention Quality Indicators (PQI) for Adult Discharges by Patient County: Beginning 2011. Retrieved July 1, 2014 from: https://health.data.ny.gov/Health/Medicaid-Inpatient-Prevention-Quality-Indicators-P/6kjt-7svn
CNA 10	Need to prevent substance abuse and other mental, emotional behavioral disorders.	Substance abuse and other mental, emotional behavioral disorders are highly prevalent. Suffolk County rates exceed	**New York State Prevention Agenda** https://apps.health.ny.gov/doh2/applinks/ebi/SASStoredProcess/guest?_program=%2FEBI%2

Community Need Identification Number	CNA Title – link to selected project	Brief Description	Primary Data Source
		statewide rates on the following Prevention Agenda measures: • Age-adjusted percentage of adults with poor mental health for 14 or more days in the last month (13.8 vs. 11.8) Health Disparities – Among the Medicaid/uninsured population, rates of unfavorable mental health findings are almost twice that of County residents overall. Substance abuse rates are also higher.	FPHIG%2Fapps%2Fdashboard%2Fpa_dashboard&p=ch&cos=47 **Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys
CNA 11	Need to improve population-based health chronic disease prevention and management.	Chronic disease is highly prevalent. Prevention strategies are needed to address excess cancer rates as well as obesity and smoking. Suffolk County rates exceed statewide rates on the following measures: • Percentage of adults who are obese (29.1% vs. 27%) • Asthma emergency department visit rate per 10,000 (54.1 vs. 50.8) • Asthma emergency department visit rate per 10,000 - Aged 0-4 years (134.4 vs. 117.2) • Age-adjusted heart attack hospitalization rate per 10,000 (18.6 vs. 16.1) Health Disparities – Racial disparities exist in relation to cancer rates and outcomes.	**New York State Prevention Agenda** https://apps.health.ny.gov/doh2/applinks/ebi/SASStoredProcess/guest?_program=%2FEBI%2FPHIG%2Fapps%2Fdashboard%2Fpa_dashboard&p=ch&cos=47 **Suffolk PPS Primary Data Collection** PRC Population and Key Informant Surveys **Suffolk County Department of Health Community Health Assessment 2014-2017**